

*United States Court of Appeals
for the Second Circuit*



APPENDIX

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74-2626

**United States Court of Appeals
FOR THE SECOND CIRCUIT**

JORDAN INTERNATIONAL COMPANY, *Plaintiff-Appellant,*
against

S.S. PIRAN, her engines, boilers, etc.,
and against

FEDERAL COMMERCE & NAVIGATION CO., LTD. and
SPLOSNA PLOVBA, *Defendants-Appellees.*
(69 Civ. 284)

EASTERN STEEL & METAL COMPANY, *Plaintiff,*
against

S.S. PIRAN, her engines, boilers, etc., SPLOSNA PLOVBA, and
FEDERAL COMMERCE & NAVIGATION CO., LTD., *Defendants.*
(69 Civ. 93)



B
P/L/S

ON APPEAL FROM THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF NEW YORK

JOINT APPENDIX

BIGHAM ENGLAR JONES & HOUSTON
Attorneys for Plaintiff-Appellant Jordan International Company
99 John Street
New York, New York 10038
732-4646

HILL, BETTS & NASH
Attorneys for Defendant-Appellee Splosna Plovba
One World Trade Center—52nd Floor
New York, New York 10048
466-4900

CICHANOWICZ & CALLAN
Attorneys for Defendant-Appellee Federal Commerce & Navigation Co., Ltd.
80 Broad Street
New York, New York 10004
344-7042

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Relevant Docket Entries.

69 Civil 284 Jordan International Co. vs. SS Piran etc.
et al.

IN ADMIRALTY

DATE	PROCEEDINGS
Jan.24-69	Filed complaint and issued summons
Jan.29.69	Filed Deft's (Federal Commerce and Navigation Co., Ltd., O) Notice of appearance.
Jul/1/69	Filed Deft Splosna Plovba ANSWER and cross claim.
Jul 23-69	Filed Interrogatories.
Jul 23-69	Filed ANSWER of Federal Commerce and Navigation Co. Ltd. to complaint, and cross-claim and answer to cross-claim.
Aug.6-69	Filed Answer of Splosna Plovba to cross-claim.
Dec.11-69	Filed Answers to Interrogatories.
Mar. 18-71	Filed deft's affidavit & notice of motion to consolidate ret. 4-13-71.
Apr.13-71	Filed Memo Endorsed on notice of motion filed 3-18-71— Motion granted on default. Settle order on notice. Metzner, J.
Apr.23-71	Filed order granting deft's motion and that this action is consolidated with 69 Civ 93 for all purposes. Metzner, J. (Filed in 69 Civ 93) M/N
Jan. 9-74	Filed consent order that the answer of deft. Federal Commerce & Navig. Co. to the complaint filed by Jordan Int'l Co. be deemed amended by the inclusion of the counterclaim (Par. 19,20 & 21) ordered that pltff. be deemed to have filed a reply denying each allegation contained therein —Griesa, J.

Relevant Docket Entries.

DATE	PROCEEDINGS
Oct 31-74	NON-JURY TRIAL BEGUN & CONTD.
Nov 7-74	TRIAL CONCLUDED. (4 DAYS) JUDGE'S DECISION FOR DEFT.
Dec.6-74	Filed pltffs notice of appeal To USCA from a decision dated 11-7-74 & any judgment based thereon, which dismissed the complts of both pltffs . . . Notices mailed to Hill Betts & Nash, 1 World Trade Center—52nd Fl., New York, N.Y. 10048, & Cichanowicz & Callan, 80 Broad St., New York, N.Y. 10004.

Opinion of Griesa, U.S.D.J.

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

69 Civ. 284

JORDAN INTERNATIONAL COMPANY,
Plaintiff,
against

SS PIRAN, her engines, boilers, etc.,
and against

FEDERAL COMMERCE & NAVIGATION CO., LTD.,
and SPLOSNA PLOVBA,
Defendants.

EASTERN STEEL & METAL COMPANY,
Plaintiff,
against

SS PIRAN, her engines, boilers, etc., SPLOSNA PLOVBA,
and FEDERAL COMMERCE & NAVIGATION CO., LTD.,
Defendants.

Before:

HONORABLE THOMAS P. GRIESA,
District Judge.

New York, New York,
November 7, 1974.

Opinion of Griesa, U.S.D.J.

Appearances:

BIGHAM, ENGLAR, JONES & HOUSTON, Esqs.,
Attorneys for Plaintiff Jordan

VINCENT L. LEIBELL, Jr. Esq., and

JOHN T. KOCHENDORFER, Esq.,
of Counsel.

HILL, RIVKINS, CAREY, LOESBERG & O'BRIEN, Esqs.,
Attorneys for Plaintiff Eastern Steel,

ROBERT J. RYNIKER, Esq., of Counsel.

HILL, BETTS & NASH, Esqs.,
Attorneys for Defendant Splosna Plovba,

MICHAEL J. RYAN, Esq., of Counsel.

CICHANOWICZ & CALLAN, Esqs.,
Attorneys for Defendant Federal Commerce &
Navigation Co., Ltd.,

DONALD B. ALLEN, Esq., of Counsel.

I am dismissing the complaints of both Jordan and Eastern for reasons which I will set forth in some detail now.

The first of these two companion cases involves a claim by Jordan International Company for the damage to fourteen bundles of steel sheets and 170 coils of rolled steel, or a total of 184 packages shipped on board the SS Piran. The claim of plaintiff Eastern Steel & Metal Company relates to 173 coils of rolled steel shipped on the same vessel.

The quantities of steel I have referred to were all stowed in the No. 1 Hatch of the SS Piran on a voyage from Newport, Wales, bound for the United States commencing January 31, 1968.

Opinion of Griesa, U.S.D.J.

The defendants include the following:

The owner of the ship, an entity by the name of Splosna Plovba. Splosna had time chartered the ship to the other defendant in these two matters, Federal Commerce & Navigation Company. Federal had entered into a contract with Jordan for the transportation of steel.

Eastern had made arrangement with Jordan for the transportation of certain steel and relied upon Jordan to make the necessary arrangements with the carriers. Bills of lading were issued for the steel to both Jordan and Eastern.

This is a somewhat sketchy outline of the contractual arrangements among the parties, but there is no need to go further in describing the documents and the contractual relationships because during the trial it was agreed that the Carriage of Goods By Sea Act applied, and that such statute applies with respect to the claims of both Jordan and Eastern vis-a-vis the ship, and both of the defendants, namely, Splosna and Federal. I omitted to mention that the ship itself is, of course, a defendant.

It has been agreed that if there is liability on the part of the defendants to the plaintiffs, then Splosna would be primarily liable and Federal would be secondarily liable.

As will be described, the steel in question was damaged to such an extent that it had salvage value only at the conclusion of the voyage to the United States. Jordan claims damages of approximately \$92,000 based on a \$500 per package limitation. Eastern claims damages of approximately \$32,000. There is no dispute as to the proper method of calculating Eastern's damage in the event Eastern were to recover. There is some dispute about the proper method of calculating Jordan's damages in the event of recovery by Jordan. Under the defendants' theory of calculation, the amount would not be the \$92,000 claimed by Jordan, but would be approximately \$80,000. Because of my view of the case, that is, that the

Opinion of Griesa, U.S.D.J.

complaints of both plaintiffs should be dismissed, I do not find it necessary to resolve the differences regarding the proper method of calculating damages.

The following are the facts as found by me regarding the accident and damage:

At 6:30 a.m. February 9, while the vessel was in the North Atlantic, having left Newport, Wales, on January 31, 1968, it was discovered that the hatch covering for No. 1 Hatch on the vessel was damaged, and that water, which had been driven onto the deck by high wind and seas, had entered the hatch. Pumping was unsuccessful because of clogging by debris.

I specifically find that there was no fault or unseaworthy condition respecting the pumps, and that the cause of the clogging and the unsuccessful pumping was the inevitable result of debris clogging the so-called rose boxes which surrounded the suction parts of the pumps in the bilges underneath No. 1 Hatch.

The vessel arrived at Bridgeport, Connecticut, on February 10, 1968. As already stated, the steel in the No. 1 Hatch had only salvage value, and was disposed of by the owners accordingly.

Applying the rules of the Carriage of Goods by Sea Act to the present case presents the issues in the following manner:

Since the cargo damage was caused by the entry of sea water, it is presumed that such entry was caused by an unseaworthy condition of the vessel, and defendants have the burden of rebutting this presumption. Defendants claim that the entry of the water was not caused by unseaworthiness, but by a peril of the sea for which defendants are not liable under COGSA. Defendants have the burden of proving this proposition.

If defendants do not prove the above and do not rebut the presumption that the loss was caused in whole or in

Opinion of Griesa, U.S.D.J.

part from unseaworthiness, they still may be exonerated if they can show due diligence before and at the beginning of the voyage to make the vessel seaworthy.

Returning to the facts, the No. 1 Hatch was covered with six steel covers called pontoons. Each pontoon was about 25 feet long, about 5 feet wide, and a little over a foot deep. The top plate of the pontoon was of steel 32-hundredths of an inch thick. The side plates of the pontoons were of steel 40-hundredths of an inch thick. There were webs or girders inside the pontoon of the thickness of 32-hundredths and 40-hundredths of an inch thick. Certain welding was necessary to fabricate and assemble all of these members into the pontoon.

I find that the cause of sea water entering the No. 1 Hatch was that during the voyage some extraordinary force struck the aft pontoon, that is, the No. 6 pontoon in and about its center, causing it to buckle downward and to fall part way into the hatch. The same force also struck the No. 5 pontoon and caused some deformation but nothing like the degree of deformation caused in respect to No. 6.

The evidence shows that a large mooring fender about five feet long and about two and a half feet in diameter made of wood and manila rope and weighing about 1,000 pounds was stowed on the deck immediately adjacent to the aft end of the No. 1 Hatch coaming, that is, immediately adjacent to the No. 6 pontoon, although the fender was lying on the deck so that it was lying on a surface some two feet or so below the level of the pontoon. The pontoon, of course, was lying up inside the hatch coaming.

The fender was supposed to be secured to the deck by several turns of wire at each end of the fender, and by a wire or cable running lengthwise along the fender and running through a fitting attached to the hatch coaming. The fender was stowed toward the port side of the vessel.

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The evidence indicates that at Bridgeport, Connecticut, it was found that the wire on the inboard end of the fender was broken and that it was loosely stowed. Exactly how loosely the fender was stowed is not made clear.

At first blush it might appear logical to assume that the fender somehow came loose during the voyage in the rough weather, and was somehow flying up and down and caused the deformation in the nearby pontoon. However, after analyzing the evidence on this question, I find that this did not happen. There is no evidence which convinced me that it was physically possible for this fender to be loose enough or to achieve enough height above the deck so that it could rise up above the pontoon and strike the pontoon from above.

As I understand it, no party to this action now espouses such a theory. The theory which is now urged by the plaintiffs is the theory advanced by an expert surveyor by the name of Watkins. The theory of Watkins is that the fender became loose enough to strike the aft part of the hatch coaming in which pontoon No. 6 was lying.

The theory is that the fender caused a deformation in the hatch coaming which in turn caused some kind of deformation in the pontoon which weakened it so that it was susceptible of damage from the weight of sea water coming on deck during the stormy weather.

I am constrained to reject the Watkins theory. I have examined the photographs of the hatch coaming and of the pontoon. I find no evidence from these quite clear photographs which could plausibly indicate that the severe deformation in the pontoon, in the manner this deformation occurred, could have been caused or originated by any slight deformation of the hatch coaming which occurred.

The hatch coaming was pushed in, according to Watkins' measurements, about three and a half inches at the most, or at the point of greatest deformation of the coaming.

Opinion of Griesa, U.S.D.J.

This coaming deformation was found by Watkins at Bridgeport and is shown in the photographs.

However, in my view, the most plausible explanation of the deformation in the hatch coaming is that it occurred after the pontoon fell into the hatch and at a time when there was no resistance to the hatch coaming being pushed in as it was.

I find that the damage to the No. 6 pontoon and also to the No. 5 pontoon occurred solely from extraordinary wave action which produced a sudden or almost sudden or instantaneous fall of a great weight of sea water upon the pontoon.

Defendants' experts, including a Capt. Patterson, who is a former naval and merchant marine officer with great experience in North Atlantic shipping, have so testified, and I find this view to be correct.

Aside from their testimony, I am impressed by the nature of the damage as revealed by the photographs. Capt. Patterson has pointed out that the type of indentation in the steel pontoon cover occurring irregularly over a relatively large area in the center appears to him to be the type of damage which would be caused by sea water rather than by other factors. In my view, this is a plausible and realistic analysis of the evidence. It is my own.

The question arises at this point whether the situation indeed comes within the peril-of-the-sea exception in COGSA. Another way of saying it is to ask whether the pontoon damage was the result of an extraordinary wave or an extraordinary series of waves which fell upon a sound and seaworthy pontoon, or, on the other hand, was the wave action, although severe, only what is normal and what should be expected in the North Atlantic in winter, and was it the latter kind of wave action falling on an unsound and unseaworthy pontoon which caused the damage?

Was the pontoon fit and seaworthy to stand weather which must be anticipated in the North Atlantic in winter?

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These are all ways of formulating the questions so as to indicate that we must consider on the one hand the question of whether the defendants have rebutted the presumption of unseaworthiness, and whether they have placed the case within the perils-of-the-sea exception. On all these points there has been hot debate by the parties both as to the facts and as to the interpretation of the authorities.

After considering the evidence and the authorities, I find and conclude that the defendants have rebutted the presumption of unseaworthiness and have proved their case to be within the perils-of-the-sea exception.

What is the evidence? First, I rely on the fact that the vessel was drydocked and under repair and inspection in Rotterdam, Holland, from January 2 to January 17, 1968, and that the voyage in question was really the first cargo carrying voyage after such drydocking.

The vessel sailed for Newport, Wales, on the 17th of January 1968 and arrived in Newport on January 20th.

The voyage in question commenced January 31st.

Plaintiffs are correct in pointing out that there is no specific detailed evidence about inspection specifically directed to the No. 1 Hatch covers and the No. 5 and 6 pontoons for the No. 1 Hatch, and that the evidence is of a general nature. But in my view this is to be expected. The No. 5 and No. 6 pontoons for No. 1 Hatch were not likely to be the subject of any unusual or special scrutiny aboard the ship over and above what was given to other parts of the ship. There was no reason, in the normal course of things, to have any special records or any special attention paid to the No. 5 and No. 6 pontoons for the No. 1 Hatch.

After the damage occurred, naturally the No. 5 and No. 6 pontoons were the subject of intense scrutiny, photographing and so forth, but it was not likely that this would occur before the voyage. However, this does not mean that the evidence is necessarily insufficient as to what occurred before the voyage.

Opinion of Griesa, U.S.D.J.

There has been deposition testimony and live testimony by a Lloyds surveyor who inspected the Piran at Rotterdam prior to the issuance of the load-line certificate. This evidence indicates in general terms that the hatch coverings were found to be sound. This surveyor has testified in court that he has no specific memory of specific inspections of the No. 1 Hatch or its coverings in January 1968, but he has testified as to his customary procedure. He has testified that it is his custom and practice and procedure to make thorough visual inspections of pontoons such as these for any defects, for any corrosion or for anything else which would indicate abnormality.

He has further testified that it is his practice and procedure to follow up any indications of abnormality and with further tests and requests for repairs, if necessary.

I have no reason to disbelieve or discredit this testimony, nor have I any reason to believe that his practice was not followed in this case aboard the Piran in January 1968. It would be unrealistic to thus disbelieve and to give no weight to such testimony.

There is also general evidence by the ship's personnel not as to specific inspections of No. 5 and No. 6 pontoons, but to the general inspection and soundness of the hatch covers prior to the voyage. I have no reason to disbelieve this testimony, and I credit and give weight to the testimony I have just referred to by both the Lloyds surveyor and the ship's personnel as to the soundness and seaworthiness of the No. 5 and No. 6 pontoons at and before the vessel left Newport, Wales, for the voyage in question.

I further am impressed by the physical evidence regarding the damaged pontoons as shown by the photographs taken in Bridgeport, of these pontoons in their damaged condition. In my view, this physical evidence helps to rebut the idea of the damage being caused by defects in the pontoons and is consistent with the idea of the damage being caused by an extraordinary force of sea water.

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As I have mentioned, the pictures show sizable irregular indentations over a substantial part of the center section of the No. 6 pontoon. In my view, if the damage had been caused by a defect in the cover or a defect in one of the ribs or girders, such as a defect in the metal or cracking or corrosion, in my view the appearance would have been far different from what we see. This is not the picture of a steel member which has failed from an improper weld or from corrosion or from a latent defect in the metal. It is obviously a picture of damage caused by sea water in the way that defendants' experts have testified.

Now we come to the matter of the perils of the sea. As defendants have pointed out, and as I have pointed out at times during the trial, and as everyone recognizes, there is no specific eyewitness testimony and no specific log entry regarding any extraordinary wave action of the kind that we usually associate with the doctrine of perils of the sea. Indeed, the chief mate has testified in court that there was more or less North Atlantic winter weather. However, the damage was discovered in the early morning, and presumably occurred during the night, so that the absence of eyewitness testimony about the wave action is not conclusive. Capt. Patterson, the expert referred to earlier, has testified on the basis of weather maps that during the night of February 8 and 9, 1968, the Piran was at a point in the North Atlantic where there was a heavy storm, and the Piran was at a very sensitive part of that storm. It was at a point where the storm winds were more or less starting in their circular course and then returning to the completion of a circle.

At this point, according to Capt. Patterson, cross waves and swells coming from two different directions would be expected, and it would be expected that some degree of peaking or unusually high waves, would be expected as a result of these cross swells.

Opinion of Griesa, U.S.D.J.

Capt. Patterson has outlined certain variable which would increase or moderate this peaking, but at least the evidence is clear that the Piran was at a point of unusual danger in this storm area.

Again, no one on the ship logged or has testified about observing the specific type of action Capt. Patterson was testifying about.

However, I must give weight to the evidence of Capt. Patterson as to the type of area the Piran was in, and on the specific details of what occurred on the ship, I return to what I regard as the very impressive evidence of a circumstantial manner as to the type of damage done to the pontoons. I won't repeat it, but in my view it is consistent with an extraordinary wave force falling on the pontoon. It is not consistent with damage from defects in the pontoon.

My conclusion, then, is that defendants have proved that this was a situation where an extraordinary wave action greater than could be anticipated even in North Atlantic winter weather fell on a sound and seaworthy pontoon. They have rebutted the idea that this was merely normal North Atlantic winter wave action falling on an unsound pontoon.

I realize that there are elements of uncertainty in this kind of a finding. None of us were sitting on the spot observing the situation. But in relying on the evidence in this case, as we must, I come to these findings and conclusions.

I will go farther and point out another conclusion which I believe follows from the evidence just presented. Assume that I am in error, and that in some way we could make the finding that the pontoon was in some way weaker than it should have been, and that I could say that the wave that hit it was something less than in the peril-of-the-sea category, I find it a little unrealistic to assume these things, but I will assume them for the purposes of argument. In

Opinion of Griesa, U.S.D.J.

this event, the defendants would still have open to them the opportunity to prove under COGSA that they exercised due diligence to make the pontoons seaworthy at and before the voyage, and they could exonerate themselves from liability if they shouldered this burden of proof.

The evidence which I have gone into before leads me to conclude that they have carried their burden of proving due diligence at and before the voyage in question.

As I have already described, the vessel was drydocked almost immediately prior to the voyage in question. I have described the evidence about that drydocking, and I won't repeat it. I find nothing to indicate that the defendant should have done any more inspection or repairing or testing than what the evidence indicates to me was in fact done.

This is not the case of a pump or a machine or an electronic device where one might expect certain special kinds of tests to be performed during drydocking, or perhaps at the commencement of a voyage.

Here we are dealing with massive and rather basic structural steel members. The evidence is that the Lloyds surveyor and the ship's crew members performed visual inspections, and again, that the Lloyds surveyor's inspection was done at a thorough drydocking and repair job performed in Rotterdam.

The plaintiffs have not come forward with any plausible idea of what tests should have been performed or what inspections should have been performed over and above what the evidence indicates was in fact done by the personnel involved here.

If I were to attempt to describe some other act which should have been performed to constitute due diligence, I would find nothing whatever in this present record which would furnish grounds for such description or such a ruling.

Opinion of Griesa, U.S.D.J.

Under these circumstances, I find and conclude that defendants have proved the exercise of due diligence with respect to the pontoons in question at and before the voyage.

I should mention an argument which has been discussed today and presented in the briefs filed today, and that is the contention of the plaintiffs that certain bars which were necessary to the closing of the hatch were not present. I find no reason to believe that these bars were not present and in place during the voyage in question. I was somewhat puzzled in our discussion today about why the matter was not brought up earlier, but indeed, neither party brought it up earlier, and after considering the matter, I conclude that the defendants have proved that there were sufficient bars of the type in question onhand in the vessel, and that they were in place at the commencement of the voyage, and that they were displaced by the same extraordinary wave action which caused the crushing of the pontoon.

For the above reasons the complaints of Jordan and Eastern are dismissed.

One thing that I omitted which I would like to state is that part of the evidentiary picture as to the intensity of the wave action comes from evidence about structural damage to other parts of the ship besides the pontoons. Some of this damage is not of a nature to indicate perils of the sea, but there is evidence of damage to the deck and to supporting deck girders in the No. 1 Hatch area, and this evidence, along with all the other evidence, indicates to me the perils of the sea condition which I have talked about.

Again, the conclusion is that the complaints of both plaintiffs are dismissed.

Judgment.

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

69 Civ. 284 (TPG)
(CONSOLIDATED ACTION)
For All Purposes

U S D C
FILED
1-22-75
S D N Y

JORDAN INTERNATIONAL COMPANY,

Plaintiff,

against

S.S. "PIRAN", her engines, boilers, etc.,

and against

FEDERAL COMMERCE & NAVIGATION Co., LTD.,

and against

SPLOSNA PLOVBA,

Defendants.

EASTERN STEEL & METAL COMPANY,

Plaintiff,

against

S.S. "PIRAN", her engines, boilers, etc., SPLOSNA PLOVBA
and FEDERAL COMMERCE & NAVIGATION COMPANY, LTD.,

Defendants.

The above consolidated actions having been tried before
this Court on October 31, November 1, 4 and 7, 1974; and

Judgment.

the Court having made and rendered its findings and conclusions on November 7, 1974 now,

Upon motion of Hill, Betts & Nash, attorneys for defendant, Splosna Plovba, it is hereby

ORDERED, ADJUDGED AND DECREED that the complaints of Jordan International Company and Eastern Steel and Metal Co., Inc. be and the same hereby are dismissed with costs to be taxed by the Clerk.

Dated: New York, New York
January 13, 1975

s/ THOMAS P. GRIESA
U.S.D.J.

JUDGMENT ENTERED 1-22-75

RAYMOND F. BURGHARDT
Clerk

Notice of Appeal.

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

69 Civ. 284

—————
JORDAN INTERNATIONAL COMPANY,

Plaintiff,

against

S.S. PIRAN, her engines, boilers, etc.,

and against

FEDERAL COMMERCE & NAVIGATION CO., LTD.

and SPLOSNA PLOVBA,

Defendants.

—————
EASTERN STEEL & METAL COMPANY,

Plaintiff,

against

S.S. PIRAN, her engines, boilers, etc., SPLOSNA PLOVBA

and FEDERAL COMMERCE & NAVIGATION CO., LTD.,

Defendants.

NOTICE IS HEREBY GIVEN that Jordan International Company and Eastern Steel & Metal Company, plaintiffs, hereby appeal to the United States Court of Appeals for the Second Circuit from a decision of Honorable Thomas P. Griesa, dated November 7, 1974 and any judgment based thereon, which dismissed the complaints of both plaintiffs.

Dated: New York, N. Y.,
December 6, 1974.

Yours, etc.,

BIGHAM ENGLAR JONES & HOUSTON
Attorneys for Plaintiff, Jordan
International Company

By /s/ Vincent L. Leibell, Jr.
A Member of the Firm

Office & P. O. Address:
99 John Street
New York, N. Y. 10038
REctor 2-4646

Notice of Appeal.

HILL, RIVKINS, CAREY, LOESBERG
& O'BRIEN, Attorneys for Plaintiff,
Eastern Steel & Metal Company

By /s/ Martin B. Mulroy per VLL, JR.
A Member of the Firm
(By Telephone Authority to
Vincent L. Leibell, Jr.)

To:

MESSRS. HILL, BETTS & NASH,
Attorneys for Defendant, Splosna Plovba
One World Trade Center—52nd Floor
New York, N. Y. 10048
Tel.: 466-4900

MESSRS. CICHANOWICZ & CALLAN,
Attorneys for Defendant, Federal
Commerce & Navigation Co., Ltd.
80 Broad Street
New York, N. Y. 10004
Tel.: 344-7042

Amended Notice of Appeal.

UNITED STATES DISTRICT COURT

SOUTHERN DISTRICT OF NEW YORK

(CONSOLIDATED ACTION) FOR ALL PURPOSES

69 Civ. 93

JORDAN INTERNATIONAL COMPANY,

Plaintiff,

against

S.S. PIRAN, her engines, boilers, etc.,

and against

FEDERAL COMMERCE & NAVIGATION Co., LTD. and

SPLOSNA PLOVBA,

Defendants.

EASTERN STEEL & METAL COMPANY,

Plaintiff,

against

S.S. PIRAN, her engines, boilers, etc., SPLOSNA PLOVBA,
and FEDERAL COMMERCE & NAVIGATION Co., LTD.,

Defendants.

NOTICE IS HEREBY GIVEN that Jordan International Company, plaintiff, hereby amends its Notice of Appeal dated December 6, 1974 appealing from the decision of Hon. Thomas P. Griesa dated November 7, 1974, to include an additional notice appealing the judgment, dated January

Amended Notice of Appeal.

13, 1975, which was entered on January 22, 1975, dismissing the complaints of both plaintiffs.

Dated: New York, New York
January 27, 1975

Yours, etc.,

BIGHAM ENGLAR JONES & HOUSTON
Attorneys for Plaintiff JORDAN
INTERNATIONAL COMPANY

By /s/ VINCENT L. LEIBELL, Jr.
Office & P. O. Address:
99 John Street
New York, New York 10038
732-4646

To:

HILL, RIVKINS, CAREY, LOESBERG
& O'BRIEN,
Attorneys for Plaintiff, Eastern
Steel & Metal Company
96 Fulton Street
New York, New York 10038

MESSRS. HILL, BETTS & NASH
Attorneys for Defendant, Splosna Plovba
One World Trade Center—52nd Floor
New York, New York 10048
466-4900

MESSRS. CICHANOWICZ & CALLAN
Attorneys for Defendant, Federal
Commerce & Navigation Co., Ltd.
80 Broad Street
New York, New York 10004
344-7042

Excerpts From Testimony.

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

69 Civ. 284

JORDAN INTERNATIONAL COMPANY,

Plaintiff,

against

SS PIRAN, her engines, boilers, etc.,

and against

FEDERAL COMMERCE & NAVIGATION CO., LTD.;
and SPLOSNA PLOVBA,

Defendants.

EASTERN STEEL & METAL COMPANY,

Plaintiff,

against

SS PIRAN, her engines, boilers, etc., SPLOSNA PLOVBA,
and FEDERAL COMMERCE & NAVIGATION CO., LTD.,

Defendants.

Before:

HON. THOMAS P. GRIESA,

District Judge.

New York, October 31, 1974

10:00 a.m.

Excerpts From Testimony.

APPEARANCES:

BIGHAM, ENGLAR, JONES & HOUSTON, Esqs.,
Attorneys for Plaintiff Jordan International
Company,

By: VINCENT L. LEIBELL, Jr., Esq.,
JOHN T. KOCHENDORFER, Esq.,
of Counsel

HILL, RIVKINS, CAREY, LOESBERG & O'BRIEN, Esqs.,
Attorneys for Plaintiff Eastern Steel &
Metal Company,

By: ROBERT J. RYNIKER, Esq.
PETER W. FLANAGAN, Esq.,
ROBERT E. DALEY, Esq.,
of Counsel

HILL, BETTS & NASH, Esqs.,
Attorneys for Defendant Splosna Plovba,

By: MICHAEL J. RYAN, Esq.,
GREGORY W. O'NEILL, Esq.,
of Counsel

CICHANOWICZ & CALLAN, Esqs.,
Attorneys for Defendant Federal Commerce &
Navigation Co., Ltd.,

By: DONALD B. ALLEN, Esq.,
of Counsel

* * *

Joseph Utenskar—Direct.

(201) * * * JOSEPH UTENKAR, called as a witness on behalf of defendant Splosna Plovba, having been first duly sworn, testified as follows:

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(202) Direct Examination by Mr. Ryan:

Q. Mr. Utenskar, by whom are you employed? A. By Splosna Plovba.

Q. Are they the owners of the vessel Piran? A. Yes.

Q. What is your present position with the owners? A. I am manager of supplying department.

Q. Previous to becoming manager of the supply department, what work did you do for them? A. Well, I was officer on our vessels, and my last position with this company was captain.

Q. Of what ship? A. So I was captain on three ships. The last one was a liner on an around-the-world line.

Q. Did you serve on the Piran? A. Yes, I served.

Q. Were you on board the Piran on a voyage from Newport, Wales, in January, February, to Bridgeport, Connecticut, in 1968? A. Yes.

Q. Prior to the—let me ask you this: When did you join the Piran? A. I joined the Piran at Rotterdam on 8 January 68.

(203) Q. What was the vessel doing in Rotterdam at that time? A. Oh, undergoing repairs.

Q. Was she in drydock? A. He was in drydock.

Q. How many days did she undergo repairs in Rotterdam? A. Oh, I can't remember, from the 1st of January to the 16th of January.

Q. Approximately 17 days, 16 days? A. Approximately 16 days.

Q. When the vessel left Rotterdam, where did she proceed to? A. We proceeded to Newport, England.

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Q. And what cargoes did you load at Newport? A. We loaded at Newport steel cargo, that means steel coils, steel plates, steel strips.

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(207) * * * Q. Captain Utenkar, going back to January of 1968, what position did you hold on the Piran? A. As chief mate.

Q. Did the vessel sail from Newport, Wales, to the United States with cargoes of steel? A. Yes, sir.

(208) Q. Will you tell us—strike that.

Did there come a time when the vessel encountered heavy seas and heavy weather? A. Yes.

Q. What was the first time you encountered heavy seas and heavy weather on that voyage? A. Well, the first time was I think the second and third of February.

Q. During that time were you able to ventilate or did you ventilate the holds? A. No. No, sir.

Q. Did you use the pumps of the vessel with respect to the bilge soundings? A. Yes, we use it.

Q. Were they working properly? A. Yes.

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(209) * * * Q. You had occasion prior to February 8th to pump the vessel's bilges with the ship's pumps, is that correct? A. That is correct.

Q. Was there any problem with them? A. No.

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(211) * * * The Court: All right. What do you call it? Is there one bilge pump or several bilge pumps?

The Witness: Well, your Honor, I really don't know exactly, because I am not an engineer, but I see they have more than one pump.

The Court: All right. More than one bilge pump. And what was done about the use of bilge pumps

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before the 8th of February on that voyage?

The Witness: Well, he was not able to make bilge soundings during the first period of bad weather. As a precaution we pump out all the bilges all over the vessels, that means from Hold No. 1 to Hold No. 6. Just as a precaution.

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(212) * * * Q. Prior to February 8th were there any excessive soundings in any of the bilges? When I say excessive, more than what might be usual. A. More than normal?

Q. Yes. A. No.

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Q. Would you look through that, Captain Utenskar, and find the entries for February 2nd. A. Yes.

Q. Did you sound the bilges on that day? A. Not on that day. Impossible to sound.

Q. Now, on February 3rd. A. Regarding bilges, impossible to sound, but regarding tanks, it was impossible. We have some figures here.

Q. And on the 4th? A. On the 4th, we have Bilge No. 1, port side, 15 centimeters. Bilge No. 1—

The Court: In other words, you sounded the bilges on the 4th. You were able to do it on the 4th.

A. Yes, sir.

(213) Q. When you were able to sound bilges, you sent a man out to sound them, is that right? A. That is right. The carpenter did this.

Q. What would be the situation where he would not be able to sound them? A. So he just told me that it is impossible to sound.

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The Court: Were the bilge soundings on the 4th normal or what?

The Witness : Normal, sir.

Q. I would just like to review the soundings on the 5th, the 6th, and the 7th. Were they normal soundings as well? A. Soundings on the 5th are normal soundings. On 6th are normal. Soundings on 7th are normal. And soundings on 8th, in the morning, are normal.

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Q. On the 8th what watch did you stand? A. Well, my watch was from 4 to 8 in the morning and from 4 to 8 in the evening.

(214) Q. So on the evening of February 8th you were standing a watch from 4 to 8. A. That's true.

Q. Will you describe or tell us what type of seas and weather you were encountering at that time? A. When I was in the cabin?

Q. No, what type of seas were you encountering at that time? Was it a smooth voyage, was it rough? A. No, generally speaking, it was not smooth voyage; it was very rough voyage. So on February 8th, in the evening, the wind speed increased and we had rougher sea. It was some low visibility, that means visibility was restricted.

Q. When you say you had a watch from 4 to 8, then what did you do when you left the bridge, or did you leave the bridge? A. When I left the bridge, I went down to the crew quarters to inspect that everything is okay. And at about 9 o'clock in the evening I went to my bed.

The Court: You left the bridge at about 8?

The Witness: At about 8 o'clock in the evening.

Q. While you were on the bridge, Captain, was it dark out? A. Not the whole voyage. Only the last part (215) of the voyage.

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Q. Could you see forward to the bow of the ship from the bridge where you were? A. Yes. During daylight time.

Q. What about at night? A. At night, not.

Q. The bridge on the Piran is aft, isn't it? A. Is aft, that is true.

Q. And it has six cargo holds between the bridge and the bow? A. Yes.

Q. In daylight can you see the No. 1 hatch from the bridge? A. No, sir.

Q. Why? A. Because No. 1 hatch is obscured by the masthouse, No. 1.

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(216) * * * Q. During the night time could you see any hatches? A. So during nighttime, No. 6, which is close to the bridge, is below the bridge.

Q. On your watch on February 8th, during the night, what did you see? Could you see the No. 6 hatch? A. Yes.

Q. What did you see about it? Was the vessel taking water or was it dry? A. The vessel was taking water.

Q. How was the water? How high was the water with respect to the hatch? A. It was over the hatch, over the hatch covers.

Q. Does the No. 6 have a hatch coaming? A. Yes, sir.

Q. How high is the hatch coaming from the level of the deck? A. Oh, this will be my answer, will be only an estimate. I really don't remember exactly, but I think it is about maybe three foot high.

Q. At this time, the evening of February 8th, was the vessel—what was her speed at? A. Well, this I can't remember. When I went on the bridge at 4 o'clock afternoon, the captain was there and he (217) just reduced the speed and he changed the course.

Q. Why did he reduce speed and change course? A. Yes, due to the heavy pitching of the vessel and heavy rolling.

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Q. How long did this continue, this heavy pitching and rolling? A. So, after that the captain left the bridge and he gave me the order to maintain the course and to maintain the speed, to maintain a reduced speed.

Q. Did the vessel continue to have this heavy pitching and rolling? A. Yes, sir, because the wind increases.

Q. After you left the bridge, when you finished your watch at 8 o'clock, I believe you said you went below, did you go to bed? A. At 9 o'clock in the evening, about.

Q. Were you able to sleep? A. No.

Q. Why not? A. Because the ship was rolling and pitching so heavy that I was not able to sleep.

Q. Did there come a time when this rolling and pitching stopped or diminished, got less? A. Well, maybe during the—during the late morning (218) hours.

Q. What time did you go back on the bridge? A. At 3:45 in the morning.

Q. You were on watch from 4 o'clock to 8 in the morning? A. Yes.

Q. During your watch was any damage to the vessel discovered? A. Yes.

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(219) * * * Q. Did you personally yourself at any time on the vessel, before she arrived at Bridgeport and after this report was made to you, inspect the area in the No. 1 hatch? A. Yes, sir.

Q. You did. And what did you find? A. Well, I found No. 6 pontoon hatch cover broken, and he was lying in 'tween deck, his one end.

(220) Q. When you say broken, was it broken in two? A. Not in two. He was heavily bent.

Q. Heavily bent. A. And No. 5 pontoon hatch cover was still in place but damaged. That means bent but not so heavily as No. 6 pontoon.

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Q. Just for the Court's assistance: How many pontoon covers does the No. 1 hatch have? A. Six.

Q. And you are talking now, when you say 5 and 6, these are the last two? A. These are the last two, correct.

Q. Did you note any other damage to the vessel itself, structural damage? A. Yes, I noted.

Q. Will you tell us what damage you saw? A. On that particular day I inspected or later?

Q. Strike that. We will get into that later. Was a survey conducted of damage to the vessel? A. At Bridgeport?

Q. At Bridgeport. A. Yes, sir.

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(231) * * * Q. What is that? I show you photograph 11. A. Well, that is the forward part of the masthouse No. 1 bulkhead. This is steel.

Mr. Liebell: Is this right behind the No. 1 hatch?

The Witness: It is right behind the No. 1 hatch.

Q. Does that show any damage to the bulkhead itself? A. Yes. It shows. Between the stanchions.

The Court: And this is the bulkhead right behind No. 1 hatch?

The Witness: Right behind No. 1 hatch, yes.

The Court: What is the damage? Is it broken? Is the bulkhead bent?

The Witness: The bulkhead is bent between the vertical stanchions, set in.

The Court: Now I show you two photographs marked 12 and 13. Can you tell us what they show?

(232) The Witness: So this is the weather deck beneath, and it shows damage here to the hatch girder.

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Q. Hatch girder? A. Hatch girder, yes.

Mr. Liebell: Is that paint?

The Witness: That is paint, yes.

Mr. Liebell: Painted off?

The Court: I don't picture where this is. Is this inside the hatch?

The Witness: This is in 'tween deck, inside the hatch No. 1, in 'tween deck No. 1.

The Court: In other words, the girder you are pointing to is right below the deck, which we were looking at a minute ago, is that right?

The Witness: Yes, from this second picture I can tell that the wooden part here was completely destroyed.

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(237) * * * Q. You referred to some damage to the vessel that you noted at Bridgeport after this heavy weather.
A. Yes.

Q. When you joined the vessel at Rotterdam, she was in drydock, correct? A. Yes.

Q. Did you see any of the damages that you saw at Bridgeport after the storm? A. I didn't see.

Q. When was the first time there was any damage to the No. 1 hatch as depicted in the photographs which have been marked Splosna Exhibit H? A. The first time I saw the damage, some of the (238) damage, after heavy weather, that means on the 9th of February.

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(248) * * * Q. You have crossed the North Atlantic during the (249) month of February on prior occasions? A. I am not sure exactly, but I have crossed North Atlantic during winter months several times.

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Q. As a matter of fact, in your crossings of the Atlantic you have experienced more than force 10 weather, haven't you? A. Repeat your question, please.

Q. On voyages prior to the one in question you have experienced more than force 10 weather? A. Yes, I should say so.

The Court: Was the question prior to this voyage?

Mr. Liebell: Yes, your Honor.

Q. Now, the kind of weather you had on the voyage, which ended in Bridgeport, in the North Atlantic, you would expect to get heavy weather, would you not? A. Yes, sir.

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(263) * * * The Court: This is typical winter weather in the North Atlantic?

(264) A. This is typical winter weather for the North Atlantic. I think so.

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(274) * * * The Court: But isn't it true that you have the burden of coming forward at this point with enough evidence to convince me of an accepted cause, and at the moment I am puzzled about what you have shown me as an accepted cause.

Mr. Ryan: My accepted cause at this present time, your Honor, is serious and significant damage to the vessel itself caused by heavy seas.

The Court: You have testimony that this was typical North Atlantic weather; we have testimony that that typical rough North Atlantic weather which reached certainly high wind and high seas, there is no doubt about that. I have got a log entry of February 8. In the evening the wind and sea reached

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force 10. I think that was the maximum force in those days, was it?

Mr. Ryan: Recorded in the log.

The Court: Just a moment. That was the maximum force.

Mr. Ryan: Recorded in the log.

The Court: Yes. And there were others of 8 and (275) 9, I think. And we do have evidence about the broken flag stanchion and the other damage. But frankly, that pontoon is in a special category as far as I can see sitting here right now. That was supposed to be, as far as I can see, a pretty strong, heavy member, a little heavier than a flag stanchion.

Mr. Ryan: Quite so, your Honor.

The Court: And a little heavier than the railing around the forecastle deck, whatever it was called.

I haven't analyzed this blueprint. I took it up here hopefully and I really can't read it too well. But even from the pictures this was supposed to be a pretty massive strong member and it had steel plate and it had steel longitudinal supports or whatever you call them. And that thing was bent radically.

And sitting here right now I would have a hard time saying that you had carried your burden of proof of knowing what caused that fender to break or that it was caused to break by the water or any other accepted cause.

And you can put in all the evidence you want about inspections and repairs made at Rotterdam, but I don't think I am going to know much more about the cause of that pontoon bending in than I do right now. Maybe there is something that I missed that is hidden in these records, (276) but I really don't think there is.

Mr. Ryan: If I may, your Honor?

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The Court: So I don't know what we are doing with Rotterdam records when the great mystery is unsolved, which is what happened at sea with that pontoon. And if you are not going to solve the mystery, you don't have any case.

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(280) * * * The Court: I haven't seen any pictures showing serious setting down of the deck of the ship.

Mr. Ryan: Your Honor, two of them are in evidence.

The Court: What are the two in evidence?

Mr. Ryan: They are in the stack of 15.

(281) The Court: Show them to me.

Mr. Ryan: Or H.

Mr. Liebell: Your Honor, is that in connection with the law?

The Court: You have got the flagpole broken, you have the bent rail in the back of the forecastle, you have the bent pontoons, you have got the stanchions broken at the top, those little stanchions under the mast house; you have got the bulkhead and the mast-house set in, and then Figures 12 and 13 show a girder under the deck with some slight deformation.

Mr. Ryan: That is not a slight deformation, your Honor. That is a main strength member of the deck.

The Court: Where is this located? Is this in the hold?

Mr. Ryan: It is in the hold. It is in the hold right under the deck, the weather deck.

The Court: What deck?

Mr. Ryan: This would be on the port or left side just aft of the No. 1 hatch.

If your Honor may see the hatch corner right here, that is on the port side, just aft of the No. 1

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hatch. And not only was it damaged here but longitudinals running out to the port side were also damaged. (282) This is not insignificant damage.

The Court: Do you have any pictures showing that deck really set in? This doesn't look to me like any deck is set in.

Mr Ryan: Your Honor, there has been testimony on it.

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(291) * * * EDWARD FREDERICK GANLY, called as a witness by defendant Splosna Plovba, having been first duly sworn, testified as follows:

Direct Examination by Mr. Ryan:

Q. Mr. Ganly, by whom are you employed? A. Ganly Briggs, Inc. It is a small surveying firm that I own.

Q. It is a surveying firm? A. Yes.

(292) Q. What is the nature of your business? A. I do marine surveying for owners, underwriters, attorneys. I also do analytical naval architecture, principally for attorneys in cases like this.

Q. Would you state for the Court your qualifications as regards education and profession? A. I graduated from Webb Institute of Naval Architecture in 1936 with a degree in naval architecture and marine engineering, a bachelor's degree. I worked for a short time in federal shipyards in the machinery department, but beginning January 1, 1937, and continuing to the present I have been a marine surveyor, most of that time for U.S. Salvage Association some of that time for the U.S. Navy, and the last 14 or 15 years with my own business.

Q. At my request did you review the plans of the MV Piran which have already been introduced into evidence? A. Yes, I have seen those plans.

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(293) * * * Mr. Ryan: Fine, all right, he is not.

Q. How many surveys have you conducted of ocean vessels? A. Oh, it must be—well, it is in the thousands. I suppose between 7 and 10,000.

Q. And in the course of that time have you ever worked for Mr. Liebell, for his office? A. For Mr. Liebell's firm, yes, a number of times.

Q. They have used you as an expert witness? A. As a matter of fact, they called me just yesterday.

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(295) * * * The Court: Now let us take it step by step. Let us go through the dimensions and see what we have.

Mr. Ryan: I believe the dimensions have been approximately 30 inches in diameter, five foot for the fender.

The Witness: That is what I assume. I also further assume that its weight was 800 to a thousand pounds, as Mr. Watkins has said, and I have taken it at a thousand (296) pounds.

Q. All right.

Now, as far as the dimensions of the pontoon itself, do you calculate those or take those from the plans of the vessel? A. Yes, I did.

The Court: You have assumed that the fender was 3 feet in diameter and five feet long?

The Witness: 2½ feet in diameter, about 5 feet long and it weighed about a thousand pounds.

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(297) Q. Have you also considered the thickness of the plating by which the pontoon—with which the pontoon

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was constructed? A. Well, yes. But no one has to do more than that. One has to do with the pontoon as a beam, a stiffened beam, one might say a boxbeam with an open bottom.

Q. Was this pontoon stiffened? A. Yes, it was.

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(298) * * * The Court: But I want to know all the facts you did assume in reaching whatever analysis you made.

A. May I show your Honor the work I did and we can go through the assumptions they show in the work I did, your Honor.

I set myself the problem to find the deflection and the stress caused by a fender dropping down on the center line of the hatch pontoon from a height of 10 feet. The pontoon is precisely as it is shown here on the model and in the plan. The hatch coaming is as shown in the plan. The fender is taken as I previously said, a thousand pound weight.

I further assumed that when it struck the pontoon, it struck it in the manner and in the place that would cause the highest stress and the highest deflection, which was precisely on the center line of the pontoon.

I further assumed that the fender was in no way hindered by any lines that were trailing from it. I assumed it to be a freely floating body, which was enabled to strike the pontoon from a height of 10 feet with a free fall.

(299) The Court: All right.

A. That is the problem that I solved, your Honor. And the answer is that a fender falling in that manner on that pontoon would have caused a stress of only 10,750 pounds per square inch, and the total—

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The Court: What was the figure?

The Witness: 10,750 pounds per square inch. And this is well below the elastic limit. And there would have been no permanent deflection caused to the hatch pontoon by that fender.

Furthermore, if the fender had fallen from a height of 20 feet, the stress in the pontoon would have been something in the nature of 15,000 pounds per square inch, which is still below the elastic limit of the steel.

The Court: That takes care of that.

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(300) * * * The Court: Can I see the model of the pontoon?

When you say elastic limit, what do you mean?

The Witness: I mean the amount that the steel can be stretched and when released will still come back to its original position, with no permanent deformation.

The Court: Well, in other words, is that the crucial question in deciding what it will take to bend the pontoon?

The Witness: Yes, it is, your Honor. The metal must be stressed beyond its elastic limit for it to assume (301) a shape different from the shape it had before it was stressed. Because any stress below the elastic limit, when removed, the metal comes back to the position it was before. This is what enables designers to design beams to do the job they are supposed to do without being permanently deformed.

(303) * * * Q. Did you read the testimony and report of Dr. Corman? A. Yes, I did.

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Q. All right.

Did he come to any results as to what would happen if a thousand pound weight were dropped on this pontoon from a height of 5 feet or 10 feet? You used 10 feet, so that is a common denominator. (304) A. Yes, he did.

Q. One, does his assumption or the fact that he took into consideration conform to or in what way do they conform or differ from the actual pontoon cover that was on the Piran? A. He did not consider the pontoon as it is actually constructed.

Q. In what fashion didn't he do that? A. He omitted to consider the bottom flanges on the stiffening ribs. And these are an important part of the pontoon. They give about I think 20 or 25 per cent of the moment of inertia.

The Court: He omitted to consider what?

The Witness: The bottom bars on the athwartships ribs of the pontoon. I refer you again to the model, your Honor. This model is a little bit small, but on this model there is a flat bar on each of these.

The Court: Oh, the flanges on the bottom of those.

The Witness: Yes, sir.

The Court: I see. He omitted to consider the bottom flanges.

The Witness: That is right.

The Court: And does that have an effect on this (305) problem of elastic limit?

The Witness: Not on the problem of elastic limit, your Honor, but it seriously affects the strength of the pontoon in its ability to withstand a load from the top.

The Court: All right.

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By Mr. Ryan:

Q. What type of a load contact did Dr. Corman consider in his calculations? A. A theoretically correct line contact.

Q. When you say a line contact, would that be a line contact such as the line of a ruler? A. Yes, even narrower than that. It is supposed to be a line without width.

Q. All right. Certainly not a fender approximately 30 inches in diameter. A. That is true.

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(308) * * * Q. Did Dr. Corman calculate the strain on a pontoon such as pontoon No. 6 on the Piran? A. He did not calculate the strength of the pontoon, no.

Q. What did he calculate? A. Well, he used a simplified formula to give the stress. But the formula is incorrect for this application, and it is incorrectly applied.

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(309) * * * The Witness: Referring to page 2 of Professor Corman's calculations, he deals there for the flat plate only. In other words, he is separating this pontoon into its different parts, and dealing with each one as if it were separate. And, of course, you cannot do that with a beam. But if we follow his reasoning, he has a stress then on the bottom of page 2 of 22,400 pounds per square inch. That stress is then used in another formula to get the deflection, which is quite proper, I have no complaint about that. But (310) when one uses that stress to get a deflection, the deflection is influenced directly as the measure of stress. In other words, the higher the stress, the higher the deformation, which is logical.

So that if we had this pontoon consisting only of the flat plate, with no ribs, then this formula on

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page 4, where it says the deformation, would have instead of 70,000 pounds for the stress, the figure of only 22,400 pounds. And of course the deformation would be less. It comes out to be half an inch. But of course at 22,000 pounds it would be only, say, a third of that. So much for that.

But now Professor Corman considers the beams or the flanges—pardon me—the stiffeners, under the pontoon, and gets a stress for them. He uses the same formula, which incidentally is correct for the stiffeners, and multiplies it by 3 because there are three stiffeners. So that if there were only one stiffener, the stress would be only 16,000 pounds per square inch; but because there are three he multiplies it by 3 and gets a stress of 48,000 pounds per square inch.

Of course, this, then, is added into the flat plate stress to get the 70,000.

So what this does in logic is saying that the more stiffeners you have under the hatch cover, the more it is (311) going to deflect, which reasoning from logic is wrong.

Q. In layman's terms, is Dr. Corman—the result of Dr. Corman's calculations means that the stronger you make the pontoon by adding stiffeners, the more it bends? A. That is right. That is what they say. Exactly. And you don't need to be a mathematician to see it, because you see he multiplies the stiffeners by 3. Well, if we had 6 stiffeners he would multiply it by 6. So instead of 70,000 pounds on page 4, you would have 70 plus another 48, which instead of a half an inch deflection you would have, what, maybe $\frac{3}{4}$ of an inch. So there is a mistake in logic here.

Furthermore, incidentally, there is an arithmetical error on page 2. The second line from the bottom under the

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square root sign, where it says five times ten to the 8th power, that should be 50 times 10 to the 8th power. And the answer on page 2 should be 70,000 pounds per square inch and not 22,000.

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(331) * * * By Mr. Ryan:

Q. Mr. Ganly, have you testified in this court and others as an expert on stresses and strains encountered by vessels at sea? A. Yes, I have.

Q. Would you mention some of these cases and what they involve? A. Well, there was the case of the Perama, a vessel that sank off New Orleans. There was a barge, I think its name was 501, a car float, which lost its cars in the East River. There was the Bratsburg which had an internal fracture in the tank bulkhead. There was the Ocean Eagle, (332) which broke in two off San Juan, in this court. And in Paducah, Kentucky, I had a case with the Pure Oil Company, an oil barge that buckled. In New Orleans I have testified a number of times on various barges that have buckled due to loading and grounding. And then I have done calculations for cases that were settled before trial, tanker broken in two, and so on.

Q. Is there any difference in making stress and strain calculations on a ship at sea than in calculating the stress and strain of a hatch cover? A. Oh, yes, indeed. The hatch cover is a very simple case of a simple box beam, and in this case we have concentrated load at the middle. A ship is a freely floating beam of uneven cross-sections, with uneven support, and subjected to nonuniform loading in three different planes. There is the normal bending due to the weight of the ship, there are side forces due to the sway; there are torsional forces due to twisting of the ship. The ship problem is much more complicated than the problem of the pontoon.

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Q. I believe Friday you testified that you graduated from Webb Institute. Would you tell us what courses or subjects you trained in at that school? A. Yes, in addition to naval architecture, one (333) must study strength of materials and the dynamics of motion, equations of motion, and dynamic stresses. And I studied under a mathematics professor who was at the same time a professor at Columbia, Professor Keeler; and the professor from whom I learned strength of materials was professor Frank M. Louis who left us at Webb and went to the graduate school at MIT.

Q. In your business—and, incidentally, how long have you been in business? A. Well, I have been in business—

Q. Yourself? A. —for myself since about 1961, January of 1961.

Q. Prior to that time whom were you in business for or with? A. I was an employee of U. S. Salvage Corporation, Incorporated, for about 24 and a half years except for about three years in the Navy.

Q. Do you frequently deal with damages sustained by steel structures in parts of ships? A. Yes, I do. Yes, I do. And this includes the main hull girder and also bits and pieces of machinery and brackets and longitudinals and bulkheads and so forth.

Q. In connection with surveys you have performed, have you performed surveys or inspections on vessels that (334) encounter storms in the North Atlantic in winter? A. Yes, I have.

* * * * *

(335) * * * Q. Now, Mr. Ganly, on Friday I believe I asked you how much load the hatch pontoon in this case would carry, and you stated that an allowable load was 22,000 pounds, but you hadn't calculated the maximum load that the cover could carry without damage. Have you calculated the maximum load that the cover could carry and would you explain how you did it and what is the meaning

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of an allowable load? A. The allowable load is as specified by the designer to be what we call a normal working stress that has in it a rather large factor of safety.

I calculated, then, what the hatch could carry up to the point where it would fail.

The Court: And 22,000 pounds is what, just distributed evenly?

The Witness: Yes, sir. But that is only the (336) safe working load. This hatch as a factor of safety of about 6.

So that this pontoon could hold about 132,000 pounds evenly distributed.

The Court: Okay.

The Witness: Or to bring it to this case, a concentrated case on the center line of 65,000 pounds.

* * * * *

(339) * * * The Court: Do we have testimony about the handling of this pontoon during its nine years?

Mr. Ryan: No, of course not, your Honor.

* * * * *

(350) * * * The Court: Mr. Ryan, according to what you have told me, there would be about 60 inches or something like that of wire on each end of that.

Mr. Ryan: That's right, your Honor.

(351) The Court: So then there would be maybe five feet of the wire, the so-called bridle, right?

Mr. Ryan: Approximately.

The Court: I don't understand why a test had to gobble up every bit of that wire.

Mr. Ryan: Your Honor, the simple point is this: No request was made for this, no request for pro-

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duction was made for this, until after all discovery had been completed, with the one exception of the boatswain's testimony granted to us by Judge Lasker.

Now, this is the first time—

The Court: Why do you need a request? You are coming into court and you are producing evidence about wire—

Mr. Ryan: No, no.

The Court: —that is not available for anybody to look at, it is not available for anybody to take their own tests about.

Mr. Ryan: That is not the purpose of my introducing this testimony.

The Court: What is the purpose?

Mr. Ryan: The purpose is to show what happened to it, your Honor. Our theory doesn't—or, let's say, not our theory—we don't have to really show that the wire was substantial, because the wire didn't break. But (352) I put this evidence in to controvert Mr. Liebell's inference that we were hiding it or threw it away or that it is important.

The Court: All right. Mr. Ryan, let's get, then—I am I correct, you are not introducing any of this evidence to show anything about the strength or weakness of the wire. You are simply doing your best to rebut an inference that an—a possible inference that some intentional destruction was made of the wire in order to—

Mr. Ryan: That is correct, your Honor.

* * * * *

The Court: Look, I will receive any evidence at all about the chain of possession of the wire, for whatever that is worth, but I am not receiving any evidence about the actual strength or weakness of

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the wire, at least any evidence put on by you in these documents. (353) It will not be received for that purpose. Right, Mr. Ryan?

Mr. Ryan: That is correct, your Honor.

* * * * *

(355) * * * Q. Mr. Ganly, I show you Splosna Exhibit R in evidence and would like you to refer to—

Mr. Liebell: Which one is this now?

Mr. Ryan: Exhibit R.

Mr. Liebell: Whose report?

Mr. Ryan: Mr. Lindsay's.

Q. I would like you to refer to the items found on page 4.

"Two steel pontoon type hatch covers badly buckled. Forward bulkhead of mast house aft of No. 1 hatch heavily set in between frames. Main deck set down on port side aft of No. 1 hatch at seam in line with forward bulkhead of forward mast house. Port and first inboard pipe stanchions from main deck. Winch platform forward of No. 1 mast house fractured at welded connection. Port longitudinal hatch beam distorted in second bay forward of after bulkhead. Six deck head beams from port longitudinal hatch beam to shell in second bay from after bulkhead set down and distorted."

Would you just review those for a moment while I check my notes.

(356) Mr. Ganly, would you characterize the damages set forth in those reports, specifically the ones I referred to?

* * * * *

A. Well, I would characterize this as serious hull damage because the important thing, when I saw serious hull damage, is not the damage to two steel pontoon hatch

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covers, they don't add anything to the strength of the ship. But when one reads off the main deck set down on the port side, a longitudinal hatch beam and six deck head beams, one is speaking of the top flange of the main hull girder and the damage to this seriously affects the strength of the ship.

The Court: Damage to the main deck. What were the other things?

The Witness: The port longitudinal hatch beam.

The Court: What else?

The Witness: And six deck beams. Actually there are seven deck beams here, your Honor. There are six in one item and one in another.

* * * * *

(357) * * * The Court: In other words, your testimony—you are not basing it on whether the main deck was set in an eighth of an inch or a foot?

The Witness: That's right, your Honor. When the deck is set down enough for a surveyor to call it damage, it is beyond wear and tear; it is a condition which requires repair.

* * * * *

(358) The Court: Was there any photograph of the deck, the main deck is supposed to have been set down. Is there any photograph of that deck that was set down?

The Witness: Yes. From underneath you can see the beams in one of these photographs. That is the underside.

* * * * *

Q. Mr. Ganly, would you look at those photographs and would you tell us, and referring to the characteriza-

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tion given by Mr. Lindsay, is it easier to see deck damage being set down from underneath or from on top?

* * * * *

(359) * * * A. It is easier to tell it really from underneath. And if you want to photograph it, then you have to go on the top and lay a straight edge across the top, with some sort of a measuring device in the deepest part of the indent. Otherwise it won't show in the photograph.

But one can see from underneath that the deck—

The Court: You are looking at Exhibit 15, No. 12, all right.

A. This is an athwartship view. Looking to the port side, here is the after port corner of the hatchway. Here is the damage on the longitudinal girder of the hatch side. One can see a misalignment in the bottom flange of that girder. It should be perfectly straight. One can see also that these deck beams are set down, they are curved down; which should be straight.

The Court: Is this discoloration on this—what do you call this, a beam?

The Witness: That is a longitudinal girder.

The Court: Does that mean something?

The Witness: Well, it means that it is a beam (360) which extends for a considerable length.

The Court: But does that mean anything in terms of damage?

The Witness: Oh, yes. What you are pointing to, your Honor, is where the paint has flaked off. The coefficient of elasticity of the paint is less than the steel, so as the steel bends, the paint flakes off.

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(361) * * * Q. Mr. Ganly, I also show you two other photographs, numbers H-5 and 6 in evidence, indicating the No. 6 and No. 5 pontoons.

Would you describe that damage for us? A. Referring to No. 5, and this I think is a photograph of pontoon No. 6. I identified it so because it has a rounded corner here. So that is pontoon No. 6.

The appearance of the top plate, which is buckled similarly concave and convex, up and down, shows that this plate has failed in longitudinal, critical buckling. And when I say longitudinal, it is longitudinal so far as the plates are concerned but athwartship on the ship.

The Court: So?

(362) A. You see, some buckles are up, some buckles are down. This shows that this damage could not have been caused by any object dropping down on top of the hatch repeatedly, because in that case all of the buckles would be concave.

The Court: So you have got some concave and some convex?

The Witness: Yes, sir. And the same is true of No. 5.

* * * * *

(365) * * * The Court: Would it be possible that the concave buckling shown is where there are no ribs, and the convex situation is where there are ribs?

The Witness: No, your Honor, there would be no buckling where the ribs are. The buckling is always between the ribs.

The Court: That is what I am saying.

The Witness: Up and down, both. All the

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buckling between ribs. The ribs prevent the plate from buckling where they are.

(366) The Court: And you see some convex buckling when there is no rib?

The Witness: Yes, here is convex and there is concave, in the same fore and aft line; which shows how random the buckling can be. And it shows even more, I think, on this other hatch. In fact, that is a more advanced state than this one, in the same course.

The Court: All right.

* * * * *

Q. Mr. Ganly, did you examine the plan, the hatch closing arrangement of the Piran? A. Yes, I did.

Q. Can you tell us what the clearance is between the six pontoon hatch covers that were No. 1 hatch? A. Yes. Each one had five millimeters clearance in the fore and after direction, and a total of ten millimeters sideways athwartships. So that the whole hatch had a total of 30 millimeters clearance fore and aft and just ten millimeters to one side.

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(367) * * * Q. Again, as I said, after having seen the plans, photographs, survey reports, and the calculations, do you have an opinion as to the cause of the damage to the Piran? A. Yes, I do.

Mr. Liebell: I object to that, your Honor.

The Court: Overruled.

Q. Would you please state that opinion? A. Yes. I think the damage to the Piran was caused (368) by taking on board a rather staggering amount of green water, very heavy ocean waves coming on board the ship.

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*Edward Frederick Ganly—Cross.
Richard Patterson—Direct.*

Cross Examination by Mr. Liebell:

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(373) * * * Q. Mr. Lindsay, an expert hired by Mr. Ryan has testified that a vessel traveling in the North Atlantic in the month of February should anticipate heavy weather because it is one of the worst times of the year. Do you agree? A. Yes, I do.

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(388) * * * RICHARD PATTERSON, called as a witness by defendant Splosna Plovba, having been first duly sworn, testified as follows:

Direct Examination by Mr. Ryan:

Q. Captain Patterson, would you please tell the Court your experience as a master mariner? A. Well, I started to sea in 1922, graduated from the Maritime College State University New York in 1923. Later I received my first license in 1924, sailed on various ships in the capacity of an officer. In 1927 I was with one company that was one of the 12 that later amalgamated into the U.S. Lines, so I would say I was with the U.S. Lines from that moment on. I got my master's ships in 1930.

Q. What type of ships have you commanded? A. Everything from cargo ships up to passenger liners.

Q. Could you give us the name of any of the passenger liners? A. Well, I had the America and the United States.

(389) Q. You also commanded cargo ships? A. Yes, sir, I have.

Q. Did you serve any time with the U.S. Navy? A. Six years active duty and 34 years with the reserve.

Q. What is your present rank? A. Rear Admiral, upper half, retired.

Richard Patterson—Direct.

Q. Did you command any vessels in the United States Navy? A. Yes, I did.

Q. Have you commanded vessels or sailed on vessels in winter North Atlantic crossings? A. I have.

Q. Could you give us approximately on how many? A. In the North Atlantic, approximately about 12 that I have commanded steadily in the North Atlantic trade.

Q. Steady? A. Yes.

Q. That is 12 vessels? A. 12 different vessels, yes.

Q. Have you done any work with or for the U.S. Weather or Oceanographic Service? A. Yes, sir, I have. I have done quite a bit, particularly since World War II. I have lectured the (390) Marine Department of the Weather Bureau in Washington on two occasions. I have submitted a great deal of information to them, and just when I retired I received a public services award from the Weather Bureau for my activities.

Q. Are you familiar with the weather charts published by the U.S. Department of Commerce? A. Yes, sir, I am.

Mr. Ryan: Your Honor, at this time—these are marked for identification as Splosna's Exhibit P, I believe. I would like to introduce them into evidence.

The Court: They are weather charts for each—

Mr. Ryan: They are weather charts for the period from January 31st through February 10th.

To shorten this, I won't go through all of them, your Honor. I will get down to the pertinent ones.

The Court: Any objection to those?

Mr. Liebell: No objection.

The Court: This is Exhibit what?

Mr. Ryan: It was Exhibit L for identification, your Honor.

The Court: All right, received.

(Defendant Splosna Exhibit L was received in evidence.)

Richard Patterson—Direct.

Q. Admiral Patterson, did you examine the log book, (391) translation of the Piran, previously marked Splosna's Exhibit D? A. Yes, sir, I did.

* * * * *

Q. Did you plot the course of the Piran according to her log books with respect to the weather charts, Exhibit L? A. Yes, sir, I did.

Q. You did.

What did you prepare in connection with that? A. Well, first I plotted the vessel's position every six hours, according to the Greenwich time that the weather maps were dated. And made a transparent overlay of the vessel's position at that time, to be put over the top of the weather maps.

* * * * *

(392) * * * Q. In looking at these charts and reviewing them, can you tell us whether there is anything significant with the weather observed by you or the weather that those charts depict? A. Well, the weather indicates on this of strong south southeast wind, which by its—

The Court: What date are we talking about?

The Witness: On February 8th, your Honor.

The Court: All right.

A. That that wind has been blowing from the south for several days before this time.

Q. Is that statement based upon your review of the charts for the previous days? A. Yes, sir. And at this time it indicates that there is a very severe storm over to the west southwest of the ship that is deepening and has already reached wind forces of up to 50 knots, with very heavy seas.

As a result of this existing condition, why, the vessel has had a very, very heavy southwesterly swell that has been sweeping up on them.

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Q. Can you explain for us the meaning of the term fetch? A. Fetch is the definition for the expanse of water (393) over which a wind will blow.

Q. What is the effect of wind blowing over a long fetch or expanse of water for a long duration of time as you indicated occurred here? A. Well, the wind blowing over an extensive fetch of water over a long period of time will create the maximum height and wave length and produce the most severe wave conditions.

Q. Going from the 8th to the position 0000 Greenwich time on February 9th, what time would that be local time on the vessel? A. That would have been on the 8th at 2000, local time.

Q. And the next chart 0600 would be what time on the vessel? A. 0100 local time on the vessel.

Q. Would you review or tell us—have you plotted the positions of the vessel of the Piran on the charts at those times? A. Yes, I have, on the transparencies.

Q. Would you tell us what type of weather and seas the Piran would be encountering at that place at that time?

The Court: And this is what time as far as the (394) ship was concerned?

A. This would be 2000 on February 8th.

The Court: All right.

Q. Up to what time? A. 2000 until 0100 on the 9th. She would be having winds from the south at 30, 35 knots; sea condition here is about around 20 to 25 feet, in the general area of where the ship is.

Q. You are talking about 2000 hours? A. That is right.

Q. All right. A. And on the following day—

The Court: What do you mean the following day? I thought you were sticking to—

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The Witness: On the 9th, at 0100.

The Court: 0100, all right.

The Witness: On the 9th, yes.

The Court: All right.

The Witness: And we have a position here very close to the position of the Piran, indicating 30-foot waves.

The Court: 30-foot waves this is 0100, the 9th?

The Witness: 0100 on the 9th, yes.

The Court: 30-foot waves.

The Witness: And they would be coming from the (395) south southwest.

Q. Where is the position of the Piran? Is that right in the center of the— A. Right in the southerly edge of the center of the storm.

Q. Can you describe the type of seas that would be encountered in this particular portion of the storm?

Mr. Liebell: Were encountered?

Q. That would be encountered.

* * * * *

The Witness: This would be the most awkward situation, because the vessel would still be encountering a southerly swell; the wind by this time would have shifted around to the northwest, and there would be a very heavy swell rolling down—very well, not a swell, excuse me, a very heavy sea coming from the northwest that would be encountering a heavy swell coming from the southwest.

The Court: And this is by 0100, the 9th?

The Witness: 0100, the 9th.

The Court: So the wind had shifted to what?

The Witness: The wind would have shifted to (396) about the west of the northwest. I would

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Richard Patterson Aect.

have to check on the log book for that again for certain.

The Court: So if the wind was encountering what?

The Witness: Sir?

The Court: And after the shift in direction, the wind was encountering what as far as sea conditions?

The Witness: They would have had a heavy swell rolling from the north, due to the fact that this storm with its stagnation, the wind would have been blowing—the westerly side of the storm would be coming from the north for two days and would develop a very heavy sea and swell condition.

The Court: I thought we were having wind from the south.

The Witness: It was shifting at that time, sir.

The Court: But it had been blowing from the south or southeast?

The Witness: From the south southeast to the south, and then south southwest. And it shifted rapidly around to the west and northwest as the storm came under storm conditions.

The Court: I am still not clear as to what is happening after that.

(397) The Witness: I believe, your Honor, if I could hold this up?

The Court: All right.

The Witness: I think I could explain it a little better.

Q. You sit down. A. That is all right, I can stand.

The Court: I think we just have a confusion of terms.

The Witness: Well, what I want to explain is, this wind is blowing counterclockwise around this

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way, and as the vessel was over in this position, say, a few hours before, this wind was coming from the southwest. At this point, she is just under the edge of the center of the storm. This wind now would be coming around this way, would be coming from the southwest shifting to the west, and would come around in this direction. And due to the fact this wind was blowing steadily from this north for a good many—say about two days before, it would have built up its maximum sea condition here. So we would have a swell rolling down in this direction, we would have a swell rolling this way, we would have the cross-swell meeting at just about where the ship was at 0100.

(398) The Court: So you have got the cross swell meeting where?

The Witness: Just about where the ship would be at 0100.

The Court: And that cross swell is winds coming from basically the north—swells coming from the north and south?

The Witness: North and south, yes.

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(399) * * * AFTERNOON SESSION
2:00 p.m.

Direct Examination (Continued) by Mr. Ryan:

Q. Admiral Patterson, before recess for lunch, we were discussing the vessel in the period local time of approximately 0100 on the 9th, which would be— A. 0100 local time.

Q. —which would be— A. 0600 Greenwich.

Q. —0600 Greenwich time, as that area having cross-swallows. Would you describe this type of swell in cross

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seas? A. Well, it is a case where waves moving along, two different waves or two different swell meet together, they don't destroy each other, they roll right through one another. Say, two 20-foot waves meeting each other either at right angles or head-on, they suddenly will increase their height to anywhere from 30 to 40 feet as they pass—they carry their form right through each other. And this is what we call peaking. It means two waves come together, that might be very heavy waves, strike each (400) other, and when they do there is a great deal of energy has to be dissipated somewhere as these two masses of waters meet. So the only place they can go is up. So they do. They have a terrific enormous peaking effect, sometimes they are up 75 or a hundred feet in the air, which probably the lower 40 feet of it is solid water, hundreds of tons of it.

Q. Do you know what the weight of water is, salt water, sea water? Let us take a cubic meter. A. A cubic meter is, like, one ton of sea water.

Q. One ton. A. Yes.

Q. Would you say that the clerk's desk here approximately had—well, could you give me your approximation? A. Well, it would be more than a ton there.

Q. It would be more than a ton? A. Yes, if that desk were a block of water it would be more than a ton of water there.

The Court: Can you tell me the time period during which the Piran was in this area of the crossed swells?

The Witness: Yes, sir.

The Court: What was that?

The Witness: That would be just about at 0100 (401) local time on the 9th.

The Court: It would be just for one?

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The Witness: No, sir. She would have been feeling the effects of that at about 0100 and she would be feeling that still at 0700 local time. And she would have been beginning to feel it at 2000 the day before.

The Court: So you have from about 2000 on the 8th?

The Witness: Yes, sir.

The Court: To about 0700—

The Witness: On the 9th.

The Court: All right.

The Witness: With the worst of it would be about 0100. Again something like that cannot be pinned down to the individual hour.

The Court: When was the damage discovered? The morning of the 9th?

Mr. Ryan: Yes, the morning of the 9th, your Honor.

The Court: About what time was the damage discovered?

The Witness: Approximately 0630.

The Court: If you are having this peaking effect, it can be observed from the bridge of the ship, can it not?

(402) The Witness: In the day time it could, yes, sir. At night time—I doubt if it would be at night time, unless an alternate watch just happened to be looking at it at the moment.

The Court: Is this something that is bound to happen or is it probable that it will happen, or it may or may not happen? I don't quite get the picture.

The Witness: Well, sir, it is a phenomenon of bad weather that is by no means unusual, and yet many seamen have gone to sea for many years and never actually encountered it. It probably existed

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around them at night time but they never saw it.

The Court: Wait a minute. Let me just put it this way : What does it depend on? It depends on the severity of this effect depends on what factors?

The Witness : It depends on the factors of two different wave motions meeting at an angle of about 70 degrees to around about 180 degrees.

The Court: When you say 70 degrees, you are meaning—

The Witness: Not exactly right angles but a little—

The Court: It is somewhere between, say, 70 degrees and—

(403) The Witness: And all the way around it, from head to head, driving right at each other.

The Court: What other factors does the severity of this effect depend on?

The Witness: Upon the height of the wave pattern itself.

The Court: Height of the two wave patterns?

The Witness: Yes.

The Court: What other factors?

The Witness: I'd say the wave length, which depends a great deal upon fetch that I mentioned earlier, how long that wave has been moving.

The Court: Wave length?

The Witness: Wave length is really the distance from the crest of one wave to the crest of another.

The Court: If the wave length—the wave length will be greater or lesser depending on the greater or lesser fetch.

The Witness: Yes, sir. The greater the fetch, the greater the wave length. Up to, of course, the maximum that the wind can really develop.

The Court: The longer the wave length—just the

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longer wave length increase or decrease the severity of this effect?

The Witness: The longer the wave length will actually (404) moderate it. Except it will also make it a little more predictable—unpredictable, rather, because the wave length of one wave pattern will nearly always be different from the wave length of another pattern.

The Court: Are there any other factors from which the severity of this depends? The wind itself? The Witness: The wind itself has created the waves basically. But wind itself could have moderated to almost nothing and leave the swells still rolling.

The Court: The wind at the moment, at that place, does it have an effect?

The Witness: Yes, it does. It has the effect of moving that body of water that has been created with a peaking effect. Wind will move that body of water with a great deal of velocity.

Mr. Liebell: Your Honor, may I note an objection here. Incidentally, I have great respect for Captain Patterson, we all do.

The Court: All right, let us—

Mr. Liebell: May I note my objection?

The Court: Yes.

Mr. Liebell: Captain Patterson is here to give obviously opinion evidence, based on being an expert. The opinion evidence of an expert is admissible when it is (405) based on known facts as applied to the subject matter in question. Here we have opinion evidence being given in connection with unknown facts involving the subject matter. It is speculative.

The Court: I will overrule that objection.

Let us go back to the first factor. Two different waves hitting at 70 degrees to 180 degrees.

Richard Patterson—Direct.

The Witness: Yes.

The Court: Do you have any opinion from the weather charts as to what the directions were, the angles were, at the time for the Piran?

The Witness: At the time, on the 9th, of 0100, the only thing we have in the immediate vicinity of the Piran is the Piran itself. But about a hundred miles to the southeast we have a ship report, and about 150 miles to the southwest we have one. But in the vicinity of the Piran itself we have no other. All I can do is analyze the weather map at that particular point.

The Court: On the basis of analyzing the weather map do you have any opinion as to what the—was it 70 degrees or 180 degrees or what?

The Witness: From the looks of this weather map, I would say it is probably about 150 degrees.

The Court: I take it the closer you get to (406) 180 degrees, the more severe the cross effect will be, is that right?

The Witness: No, sir. The worst of it is about at 90 degrees, when they are running across each other at right angles. This is the worst.

The Court: Do you have any facts from the logs and so forth as to the height of the two wave patterns?

The Witness: No, sir, there is nothing in the log that indicates the different wave patterns at all.

Mr. Ryan: If I may, your Honor? There is already in evidence—

The Court: I am asking this witness.

Mr. Ryan: I am sorry.

The Court: You haven't made any assumptions as to the height of the wave patterns?

The Witness: No, sir, I have not.

The Court: Okay.

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The Witness: Other than what they entered in the log book, which is a rough, very rough statement that they have picked up on what they call the old-fashioned Boford scale.

The Court: Do you have any information about the wave length?

The Witness: No, sir, I do not.

(407) The Court: And as far as the wind, we would look at the log?

The Witness: Yes, we would have to look at the log.

The Court: Is there any information from your weather maps about wind at these times?

The Witness: Only what I can estimate from looking at the weather map. At 0100 the wind would appear to be about west southwest, and the force, I would say, would not be at that moment more than about 30 knots, because the ship at that time is right in the center of the storm where the wind is very light, although the seas and swells continue the same.

The Court: The exact degree of this cross swell effect could be increased or moderated, depending on what actually was occurring in all these four factors, could it not?

The Witness: Yes, sir.

The Court: It would definitely.

The Witness: Definitely would.

* * * * *

(208) * * * I show you 2 photographs. Have you seen those before? A. Yes, I have.

Q. Based upon your review of the vessel's log book and the weather charts and your experience at sea, and looking at the damages depicted in those two photographs, can

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you express an opinion as to what would cause that damage?

Mr. Liebell: I would object to the question, your Honor, unless there is a showing that Captain Patterson has a scientific background and he had—no question about his having experience at sea—but this involves laws of physics.

The Court: I will overrule the objection.

The Witness: I would say this has been, on both of them, it has been created by a great weight coming down on top, and the only thing I can imagine doing that would be a big mass of water.

(409) Q. Thank you. A. And that is on both of these individual hatch covers.

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Cross Examination by Mr. Liebell:

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(410) * * * Q. And then, sir, for the February 8th log entry, we find these entries: "In the evening the wind and sea is getting stronger, from the southwesterly direction." Would that be unusual for February in the North Atlantic? A. No, not at all.

(411) Q. Another entry for the same day: "In the evening the wind and sea reached force 10B"—"B" meaning Boford.

Would that be unusual for the month of February in the North Atlantic? A. No.

The Court: What does force 10 wind mean?

A. 50 knot wind, sir.

Q. Would be it correct—

The Court: And what is the force 10 sea mean?

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A. Force 10 sea is, as near as I can understand, your Honor, from the way they have entered in that log book, they have taken a force 10 sea as an old description of waves but not of a definite height. But of conditions that a sailing vessel could maneuver under. This is the old Boford system, which many of the European ships still follow.

The Court: Could not maneuver under?

The Witness: But would be just barely able to maneuver under.

Q. That would be a sailing vessel? A. Yes.

Q. Not a 10,000 ton vessel? A. No, sir, not at all.

The Court: So that 10 as far the sea doesn't have too much meaning?

(412) The Witness: Doesn't have too much meaning with that, no, sir.

Q. Captain, did you also note the entry for the same date, "Shipping sea all over the deck and hatches," and I ask you, is that unusual for the month of February in the North Atlantic? A. No.

Q. And finally this: "The ship is pitching heavily and rolling". And again I ask you is that unusual for the month of February in the North Atlantic? A. No, sir, that is not.

Q. Did you at any point in the reading of the log book note any entry about confused seas? A. No, I cannot recall having seen that.

Q. That is something you would enter as the captain of a vessel, wouldn't you? A. I would, yes.

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(413) * * * Q. Did I understand correctly, Captain, that you said that these maps that you are referring to,

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they are based on reports from ships at sea, is that correct?
A. Yes, they are.

Q. And at the critical time for our case did I understand you to say that there is no report from any ship that was within a hundred miles of the Piran? A. No, sir. There probably were reports sent in, but the reports of the ships that you see on those weather maps are probably no more than one-tenth of the reports that have gone into the Weather Bureau.

(414) They select these ships, scatter them over the ocean, in order to get a broad picture of it.

Q. But for the spacing on the maps that you used, and you were referring to where the vessel was located and where the vessels who reported were located? A. Yes.

Q. They are the only ones we have; whether there were others or not we don't know. A. That is right, the only ones we have on the map.

Q. So from the only ones we have, is it true that there was no report from any vessel that was within a hundred miles of the Piran? A. Not on that map, no, sir.

Q. And that is the map you used. A. Yes, sir.

The Court: Let me if I can get the picture: There were probably a lot of vessels reporting weather at that time.

The Witness: Yes.

The Court: But only a few were actually used in creating these weather maps that you have used.

The Witness: I think I would put it a little different, your Honor: That probably hundreds were used in order to create the weather map but only a limited number (415) are reproduced on the map, because they could not put all of the number of ships. They would be squeezed together. So they have what they call selected ships in which they

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take—just show those on the map, enough to give everybody a complete understanding of why these circulates are the way they are and why the wind forces are the way they are.

The Court: What I am not clear on is, is the information on those weather maps that you referred to—

The Witness: Yes.

The Court: —is that information just taken from the few ships or is it—

The Witness: No, sir, that is taken from many more ships.

The Court: All right. I guess I missed the significance. What is the significance of just a few ships?

The Witness: Well, the only significance is that after they have developed a weather report from probably ten times the number of ships that we see on the map, then they merely indicate a limited number of ships that, because otherwise they could have half a dozen ships also squeezed close together that they could not possibly indicate the various wind directions. But they say they select the ships of different areas.

The Court: Can I see one of those?

(416) The Witness: I think I can explain it rather quickly on the map. I don't even need it for that particular day. I can show it on any one of the days.

On here you notice there is a ship right here. There is another one. There is another one.

Mr. Liebell: They are pretty close together?

The Witness: No, these two here—

The Court: Why don't we go on this one?

The Witness: They are two hundred miles apart.

The Court: Why don't we go to the one here?

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The Witness: All right.

The Court: Now you are looking at which one?

The Witness: 0100. We have one ship right in here. Here is another one right here. There is another up in here, another one in here. Now, this is just to cover this particular area, there are probably 50 ship reports that have been sent in.

The Court: Over an area of how many square miles?

The Witness: I would say this would be—let us take this little block in here, it would be 30 to up to 45, that would be, well, 300, 600, 900 miles by 600 miles wide.

The Court: And in that would be maybe 50 ship reports at that time?

The Witness: Yes. Then they would only show (417) a limited number of ship reports.

The Court: But the information here, these lines, that is the information actually derived from all 50.

The Witness: Yes, sir, that is right.

The Court: But they have only shown specific reports for a few ships.

The Witness: That is right.

The Court: All right.

By Mr. Liebell:

Q. Captain, for this time in February 1968, in that particular area, you don't know for certain how many ships were in that area, do you? A. I couldn't tell you myself, no.

Q. Now, using—

The Court: In that area that we mentioned there are four specific ship reports mentioned.

The Witness: Yes.

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The Court: And what is the closest to the Piran?
The Witness: The closest to the Piran is here about 100 miles.

By Mr. Liebell:

Q. As a matter of fact, do you call these (418) circles, Captain? A. Isobars.

Q. Bars. A. Isobars.

Q. Yes.

And there is one that the government put down a hundred miles away? A. That is the nearest one. There may have been many others in there.

Q. But there may not have been any at that particular time. A. I doubt that because this is a major trade route running through this area.

Q. It is the middle of the winter, we don't know. A. We don't know but we can always find out.

Q. But going on the information that we have now, the nearest one is a hundred miles, and in fact the nearest bar, as you call it, that they have on their chart to the Piran is a hundred miles away? A. No, sir, it is right on it.

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(419) * * * Q. I understand, Captain, that you said that you could make no assumption at all as to wave heights based on those? A. No, I couldn't make an assumption onto it.

Q. I took down some notes here; that said no assumption to the question that the Judge was asking, no assumption of wave heights; and no information as to the wave length. A. No, I have to sit down and calculate that, and it would not be an accurate calculation here.

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(422) * * * The Court: Does that look to you like deformation of some kind?

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The Witness: Yes, it would appear to be there has been a pressure on this particular beam right in here, this stiffener rather. That it has been compressed this way.

The Court: In your experience in traveling the North Atlantic have you seen instances where water will hit the deck with such force as to cause that kind of—that much deformation?

The Witness: Yes, sir, I have.

The Court: You say you never have—have you travelled on ships with hatch coverings like this?

The Witness: Yes, I have.

The Court: And have you travelled in seas in cross swell conditions where the deck is being deformed as in this other picture, No. 12?

The Witness: Thrust down to this extent but I don't know if it would be in exactly the same position as this one but thrust down like that, yes.

(423) The Court: I think what we are all puzzling about is the—obviously, the issue is whether this pontoon damage could be caused by water. And I take it you have never seen a pontoon deformed to that extent by water in your experience, have you?

The Witness: No, sir, I have never encountered it myself. I have seen pontoons that have been damaged on other ships but quite frankly not to this extent. I have seen them pushed in on other ships. I went aboard as a matter of professional curiosity to see what had happened but I have not seen them damaged to that extent. But considering that the damage concentrates all in and around here, and it has buckled up.

The Court: What do you mean buckled up?

The Witness: I mean what we call it, bent this way (indicating).

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The Court: All right.

The Witness: It had to be something of enormous weight to hit this thing and it had to be spread over a fairly wide area. It couldn't be a concentrated small, I'd say almost like a spear point to do that. It took an awful lot of weight right straight in the center of this hatch to do this, to cause it to buckle all the way up.

The Court: I see. But you would not think it (424) would be just one concentrated object?

The Witness: No, sir.

The Court: Why do you say that?

The Witness: Because of the way it seems to start way out as far as here, on this section. You see, there are stiffening frames all along here on hatch covers. You see this condition here, and this is where it is buckled, it is buckled inward. Sometimes these things, with a heavy weight on it, there is more of a concentrated weight. It is pushed in over here, from here all the way to here.

The Court: What if you had the same object hitting it in several places bouncing along?

The Witness: It would have to be a very, very heavy object to be doing that. Something would have to have a good many tons on them because these hatch covers are very, very stiff and very strong. Something to make them buckle it takes an enormous amount of weight. I feel this happened all at once, it concentrated and buckled it.

The Court: You feel one of these peak waves could do it?

The Witness: The peak wave could do it. Anything else would make it, push it in between the stiffening frames and make more a series of dents rather than a great, big condition like this.

William Frederick Nesser—Direct.

(425) * * * By Mr. Liebell:

Q. Captain Patterson, looking at this particular pontoon, did you know anything about the condition of that pontoon before the collapse? A. I wouldn't have the faintest idea.

Q. Do you know by looking at it that the pontoon is rusted? A. Yes, I can see that.

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(427) WILLIAM FREDERICK NESSER, called as a witness on behalf of defendant Splosna Plovba, being first duly sworn, testified as follows:

Direct Examination by Mr. Ryan:

Q. Captain Nesser, what is your employment? A. Marine surveyor with Buchruch & Wood Associates, Inc.

Q. In 1968, February, were you requested to perform—to do something on board the Piran? A. I was.

Q. What were you asked to do? A. I was asked to go down and pick up two pieces of wire, a can of residue, supposedly taken from the rose box in No. 1 hold, and look at a hatch cover and have a coupon cut from this for testing by Pittsburgh Laboratory as well as the wire.

Q. Did you go aboard the Piran and perform what you were asked to do? A. I did.

Q. That was the extent of what you were asked to do? A. That is all I was asked to do.

(428) The Court: Where was this? Bridgeport?

The Witness: No, this was in New Orleans.

The Court: In New Orleans.

Q. Did you obtain the wire and can of trash? A. I did.

Q. From whom did you obtain it? A. Chief officer.

William Frederick Nesser—Direct.

Q. And whom did you give it to? A. I delivered it to Pittsburgh Testing Laboratory in New Orleans.

Q. Did you ask Pittsburgh Testing Laboratory to retain any of these items and return them to you? A. No, sir.

Q. Other than the instructions to go aboard the vessel and obtain the trash and the wire and test the plug from the pontoon, were you given any other instructions? A. No, sir.

Q. Did you happen to take some photographs when you were on board? A. I did as a matter of course.

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(429) * * * Q. I would like you to refer to Exhibit V-1. Can you tell me what this is a photograph of? A. Well, the starboard after corner of the No. 1 hatch, looking from the port side.

Q. And it would be over in this corner? A. This area here is this right here.

Q. What is— A. The only reason I took this, I said well, this is where the cover must have torn loose when it fell into the hold. This is the distortion of this support when the cover went down into the hold.

The Court: This is V-1.

Mr. Ryan: 1.

The Court: And this is what corner of the hatch again?

The Witness: After starboard corner.

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(430) * * * Q. Do you know what happened to the plug that was tested or the wire or the trash? A. No. I assume they were—of course, the wire when it was tested to destruction was no longer of any use, so I am sure they discarded it.

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William Frederick Nesser—Direct.

(473) * * * The Court: I would like to get back to the knotty question of causation. And maybe the best way to pose this, Mr. Ryan, is to say to you that I would question whether you have sustained your burden of proof on showing either of two things:

One, the seaworthiness of the pontoon; second, the perils of the sea defense.

(474) I think it would seem to me quite close, but I feel there is considerable mystery about what caused that pontoon to cave in, and you are disadvantaged by that mystery, obviously. I don't know exactly what questions to ask you, except to say this:

I think one factor is that you had the cover of that pontoon or the shipowner had the cover of the pontoon analyzed, but had no analysis made of the, what do we call them, the struts?

Mr. Liebell: Strengthening members.

The Court: The strength members.

Now, I don't want to quibble, but it does seem to me, if there was going to be a test made, that any kind of analysis, why, probably something should have been done with those struts or strength members.

Secondly, as far as the condition of the sea, the only live witness appearing was the chief mate and he said it was just what was expected in the North Atlantic at this time. Nobody either logged or testified to or observed any of these extraordinary conditions.

Now, Captain Patterson was a splendid, a fine witness as far as his theories. And he set the stage, and he did get some distance in proving this extraordinary weather. He proved the circumstances were there. But he (475) actually, in response to my questions, presented a number of factors, a number

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of variables. And he didn't know the extent to which those variables existed or didn't exist, precisely, and that really prevented him obviously from proving with precision what happened.

The only people who could only do that would be the witnesses, and they couldn't give any testimony, nor did the log report.

So I don't see how you have proven the extraordinary sea conditions necessary for a peril of the sea.

Your witness, the expert, pretty much convinced me, and I am not unconvinced by anything in Mr. Liebell's case, that the—I don't think it was caused by the fender pounding on top of the pontoon.

Mr. Liebell: I really don't under the evidence think so either, on the top of the pontoon, but I agree with the Watkins theory.

The Court: I don't know what happened, and it probably was water, but the question is whether water struck, whether water of extraordinary magnitude within the perils of the sea doctrine struck a sound and seaworthy pontoon. That is my ultimate question. And I can't say that you have proved that it did in either branch of that question.

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(519) * * * LEENDERT OLIVER JONKER, called as a witness in behalf of defendant Splosna, being first duly sworn, testified as follows:

Direct Examination by Mr. Ryan:

Q. Mr. Jonker, by whom are you presently employed?
A. Pardon? I didn't get that.

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Q. By whom are you presently employed? (520) A. By Lloyd's Register, and particularly by the Rotterdam office, so I am attached to the Holland staff.

Q. And what are your duties with Lloyd's Register? A. With Lloyd's Register, I am working as a ship surveyor.

Q. How long have you worked as a ship's surveyor with Lloyd's? A. I started exactly on the 1st of June 1954.

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Q. Can you tell us what education or background you had before you started with Lloyd's? A. Well, after primary school, I attended high school. After high technical school or technical high school, as you may call it, in Dordrecht, and followed the course in naval architecture, which I finished in 1943.

Q. In the course of your duties as a surveyor for Lloyd's, approximately how many vessels have you examined? A. Quite a number. At this present moment, I hardly (521) am examining any vessels at all, but in the past when being specifically employed at the repair work mainly, it might vary between 150 and 250 vessels a year.

Q. A year? A. Minor surveys, extensive surveys.

Q. I show you a document. It's been previously marked Splosna's Exhibit X in evidence. Can you identify that? A. Yes, that's the report made out by me for the committee after I had carried out the necessary survey on the motor ship Piran.

Q. And when was the survey carried out? A. The survey was carried out mainly in January '68. I started off—let me see—I paid the first visit on the 28th of December 1967, and completed the survey on the 17th of January 1968.

Q. In the course of your inspections of the Piran in connection with the survey, did you have occasion or would you have had occasion to examine her pontoon hatch covers, particularly with No. 1 Hatch? A. I must have.

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Q. Why do you say that? A. Because that's a rule, a requirement, and I would refuse to issue any certificate without having seen all the (522) hatches with closing appliances.

Mr. Liebell: I move to strike out the answer, your Honor, on the grounds that the answer is that he must have done something because of something else. His testimony should be did he do it or didn't he.

The Court: Motion denied. I take it you don't have an actual memory of looking at the hatch covers on No. 1 Hatch of the SS Piran in January 1968?

The Witness: No.

The Court: And you are testifying on the basis of custom and practice?

The Witness: Yes, your Honor.

The Court: What is your custom and practice as far as inspecting hatch covers? What do you do?

The Witness: May I restrict this to the type of covers at the moment under consideration, to the pontoon type hatch covers?

The Court: Yes, of course.

The Witness: I examine them visually, as well from the top as from underneath, depending on the type of ship. When the ship has got a 'tweendecks, you have got easy access from the 'tweendeck for visual examination. When the ship has no 'tween-deck, you have to remove the covers and turn them over because then usually the depth (523) of the hold is too extreme to get the proper judgment of the condition.

The Court: What do you look for?

The Witness: Any defects. In the first place, see if there is any deformation to the covers as a

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whole; if there are any defects to the welding of the girders, the actual stiffening members of the pontoon cover, and what you see in the first place, whether there is any signs of corrosion or not.

Q. Mr. Jonker, in the event you do see some defect or sign of corrosion, what do you do? A. If I see corrosion, I give it a closer inspection, depending on where the corrosion is occurring.

For instance, with the top plating of the cover in the first instance, I would like to hammer-test it. There are different kinds of corrosion. It may be an over-all corrosion; it may be local pitting.

The Court: What does a hammer test do?

The Witness: The hammer test, well, your Honor, an experienced surveyor, you have a hammer in your one hand and you touch the plating with the fingertips of your left hand, and it gives you an indication of the general thickness of the plating, your Honor.

Mr. Liebell: Your Honor, I object to that type of (524) answer. He is not testifying to custom or usage. What he is saying in effect is, "I always do a good job."

The Court: No, please let's not waste time. I deny the motion and overrule the objection.

Q. In the event you found some defect or corrosion which would require repair, would you issue your report or would something further have to be done? A. No, I would require immediate repairs, since at that time the ship was undergoing a survey, and then she has fully to comply with the requirements of the rules as well as the load-line regulations.

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Q. You say the load-line regulations. Is it the load-line convention? A. Yes, indeed.

Q. With respect to the Piran, in January of 1968 did she in fact comply with the load-line convention of 1966?

A. She did. Also, she was not provided with a 1966 load-line certificate.

The Court: She was what?

The Witness: She was not provided with a 1966 convention load-line certificate.

The Court: What do you mean by that?

The Witness: Your Honor, this was just in the transition period between the 1930 load-line convention (525) elapsing and the 1966 convention coming into force. For compliance with this 1966 convention, a number of alterations had been carried out in such a way that at the moment the 1966 convention was coming into force, the owners would not have any trouble, and only did have to alter the freeboard markings and get new certificates.

The Court: But you are saying that the Piran at the conclusion of this drydocking complied with the 1966 rules.

The Witness: Correct, your Honor.

The Court: What is the significance of that as far as the No. 1 Hatch is concerned?

The Witness: It means that according to the 1966 convention, she complied as far as strength and outfit is concerned fully with the 1966 convention, which meant that she could, as soon as this convention came into force, load slightly deeper.

The Court: This has to do with her watertight integrity, I take it?

The Witness: It was the whole construction of the ship, your Honor.

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The Court: But in other words, was is the significance if in fact there is compliance with the 1966 regulations? What does that mean as far as No. 1 Hatch?

(526) A. That in the future the ship—

The Court: Just what conclusion? Does it mean that the pontoon is proper or what does it mean?

The Witness: The pontoon was deemed proper, also for a deeper draft.

The Court: Did the load-line regulations say anything specifically about the thickness of steel or the type of fittings or anything like that?

The Witness: Not specifically, but it indicates the strength required, and that's also laid down in the classification rules.

Q. Is there anything that prescribes the construction of the pontoon, the thickness of steel, whether there is to be welding or some other means of fabricating?

Is there any regulation that specifies that? A. Yes.

Q. What is that regulation? A. There are formulas in the rules which indicate the strength required for the pontoon hatch covers. Now, depending on the design of the hatch cover, there are alternatives depending on the number of girders you are making underneath. You can imagine if you space the girders very close, you can comparatively do it with less thickness of plating. When you have wider fields of plating, (527) you need some thicker plating.

The Court: Normally, when you inspect pontoons or hatch covers, do you have in mind their requirements under the regulations?

The Witness: Yes, your Honor.

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The Court: Are you aware of how to calculate what the thickness should be and so forth?

The Witness: Yes.

The Court: The certificate you issued, can I have that?

Mr. Ryan: Your Honor, let me ask this.

The Court: Right.

Q. Upon completion of your inspection, you issue a report a copy of which is marked Exhibit X; is that correct?

A. Yes, sir.

Q. Is there a certificate issued on the basis of this report? A. Yes, on the basis of this report and your load-line certificate as issued.

Q. I show you a copy of Defendant's Exhibit AA. This is the load-line certificate. Is that a copy of the load-line certificate which would be issued upon the basis of your report of your examination of the Piran? A. This was the official certificate issued by our (528) head office in London after he had received my report on this particular survey.

The Court: Let's go back to December, the specific tests of pontoons. You make a visual inspection and then if you see corrosion you will sometimes make a hammer test.

Are there any other tests or inspections that you do under any circumstances in connection with the pontoon?

The Witness: Yes, your Honor. If the condition of the pontoons is doubtful, then I have a check on the actual thickness of the material.

The Court: How do you do that?

The Witness: Usually by drilling a small hole and measuring the actual thickness.

The Court: Are there any other tests or inspections other than the ones you have described?

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The Witness: Nowadays instead of drilling holes and measuring the actual thickness, much is done by determining the thickness by means of ultrasonics.

The Court: When was this means of testing introduced?

The Witness: Oh, quite a long time ago already, but it has become more popular in about, let us say, in the past ten years, all depending on the extent of examination you have to do.

(529) The Court: What is it you do to test by ultrasonics?

The Witness: The thickness of the plating.

The Court: Is it a machine you bring over?

The Witness: It's not done by me personally. There are experts for this job who are equipped with these instruments, and who can be checked by us checking the instruments by means of a test block.

The Court: I suppose this could be used to test hull thickness, right?

The Witness: Beg your pardon?

The Court: It could be used to test hull thickness?

The Witness: Yes, correct, your Honor.

The Court: And deck thickness?

The Witness: Yes.

The Court: All right.

You don't routinely test the whole hull and all the pontoons and everything with ultrasonics; you don't do that routinely for everything?

The Witness: No, your Honor.

The Court: When is it that you do use the ultrasonic means of testing?

The Witness: Only in doubtful cases.

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The Court: Where you would drill a hole?

(530) The Witness: No. As I told you, there is an alternative. It's either drilling holes or using ultrasonics.

The Court: Back in 1968 at Rotterdam, was the ultrasonic testing means available?

The Witness: Yes, your Honor.

The Court: Is there any record of it being used on the Piran?

The Witness: No.

The Court: All right.

Q. In conjunction with your inspection, did you also test or determine or would you also determine that the closing arrangements for the hatches were available and in proper condition? A. Yes, sir.

The Court: I didn't hear the question.

Mr. Ryan: I asked him, your Honor, if in conjunction with his inspection he would also see that the closing arrangements for the hatches were—

The Court: What do you mean by closing, what closing arrangements?

The Witness: That's everything which belongs to insuring the proper water tightness of the openings.

The Court: What would that include?

(531) The Witness: In this case, with the type of pontoon hatches, that means the pontoon covers themselves, the coamings of the hatchway, the tarpaulins that come on top of the canvas, the battens for battening down the tarpaulins, the wedges, and the locking bars for securing the covers in place.

Q. Based upon your examination or your reported examination on the Piran, can you state your opinion as to

Leendert Oliver Jonker—Cross.

the condition of her No. 1 Hatch at the conclusion of your examination? A. It was all in good condition.

* * * * *

Cross Examination by Mr. Liebell:

Q. Do you have any notes you may have made in connection with a survey of the vessel in January of 1968? A. As laid down in the report which was just—

Q. No, I asked you if you have your original notes. A. I couldn't have them.

The Court: I didn't hear. You don't know whether you have your original notes?

The Witness: No, I don't know.

Q. Outside of the report that you see here that you have identified, are you relying on your memory? (532)

A. No, sir.

Q. What else are you relying on? A. I am relying on the general practice.

Q. Of yourself? A. Of myself.

Q. And in your opinion you always did a good job? A. Yes, sir.

Q. Thorough job? A. Yes.

Q. Is there anything in your report that talks about or mentions the details of your inspection of the pontoon covers? A. No.

Q. So you have no recollection of your particular inspection, you have no notes, there is nothing in the report, but your testimony is based upon your assumption that you always do a good job; is that correct? A. Not fully. In my report, there is the notes that the hatchways were found good.

Q. The hatchways? A. That means that includes all the required closing appliances.

Leendert Oliver Jonker—Cross.

Q. Hatchways are different from hatch covers, aren't they? (533) A. The hatch covers were tarpaulin with wedges with the battens belonging to the closing appliances of the hatchway.

Q. Are these pontoon covers numbered? A. Beg your pardon?

Q. Are the pontoon covers for the hatches numbered?
A. Not on every ship?

Q. I didn't hear you, I am sorry. A. Not on every ship?

Q. On the Piran were they numbered? A. I couldn't tell you.

Q. Were you in Newport, Wales, with the ship while it was loading steel for a trip to the United States? A. No, sir.

Q. You don't know what the condition of the ship was in Bridgeport, do you? A. No, sir.

Q. Do you know the condition in Bridgeport of the pontoon covers for the No. 1 Hatch? A. No, sir.

* * * * *

(534) Q. Were the pontoons in place on the No. 1 hold when you inspected them, or were they piled one on top of the other on the deck of the vessel? A. I don't know.

Q. Do you know whether the 'tweendeck was in place while the vessel was in Rotterdam? A. No, sir.

Q. Do you know how many pontoon covers were on this vessel? (535) A. No, sir.

Q. Do you know, if they were piled on top of each other, how many were piled on top of each other? A. No, sir.

Q. You have no way of knowing whether or not the pontoons that you say you examined in Rotterdam were actually the pontoons that were on the vessel on the trip from Newport to the United States; is that correct? A. Will you repeat this, please?

Q. You have no way of knowing, do you, that the pontoons you examined in Rotterdam were the same pontoons

Leendert Oliver Jonker—Cross.

that were on the vessel when it left Newport, Wales, for the United States? A. No, sir.

Q. You have no way of knowing, do you, that if the pontoons were in fact the same, whether or not they had in any manner been damaged between the time you examined them and the time the vessel left Newport, Wales? A. No, sir.

Q. Did you check for hatch covers against the plans? A. I don't know.

* * * * *

(536) * * * The Court: Then how would you check? You said you would check that all of the closing—you do some kind of checking about all the closing devices, rights?

The Witness: Yes, your Honor.

The Court: How would you do that?

The Witness: In the first place, by examining the pontoon hatch covers themselves, either in place or ashore, or on the deck, and have them turned around by crane, but I have to see them in place as well.

The Court: In other words, you would see them in place?

The Witness: Yes, sir.

The Court: Because if they were just piled up somewhere, they might not fit, right?

The Witness: Impossible for an inspection, your Honor.

* * * * *

**Excerpts from Deposition of Ivan L. H. James
Read into Record.**

Friday, 4 September 1970

IVAN LEON HILLARY JAMES, Sworn

Examined by MR. PREM

(2) Q. What is your name? A. Ivan Leon Hillary James.

Q. What is your address? A. Tynewydd, Pen-y-Lan Farm, Barrack Hill, Newport, Monmouthshire.

Q. What is your present occupation? A. Cargo superintendent.

Q. By whom employed? A. Newport Stevedoring Company.

Q. The approximate period of time you have held that position? A. Since 1960.

* * * * *

Examined by MR. RYAN

Q. I think you testified that you cannot remember the loading of the Piran specifically as to details. Is that correct? A. That is correct.

Q. You also had three men under you. Is that correct, normally? A. Three or four.

Q. Do you see each and every coil that is loaded into a ship? Can you say that you saw each and every coil loaded into the Piran? A. No, I could not say that.

(14) * * * Q. Do you recall any unusual incidents in the loading of the Piran? A. No.

(15) Q. Can you recall any specific instances as to damage to a particular coil? A. No.

Q. Can you recall any specific instances as to damage to the ship? A. Not without recourse to records.

* * * * *

**Excerpts from Deposition of William F. Watkins
Read into Record.**

(3) * * * Examination by Mr. Liebell:

Q. Mr. Watkins, are you presently self-employed? A. Yes, I am.

Q. In what capacity do you work? A. I am self-employed as a marine surveyor and consultant.

Q. Where is your office located? A. 29 John Street, New York City.

Q. What school did you go to as a college or as an equivalent education? A. I am a graduate of the Massachusetts Institute of Technology with a degree, Bachelor of Science, in marine engineering and naval architecture.

(4) Q. What class of MIT did you belong to? A. I was in the class of 1942.

Q. Following your graduation from MIT, where were you employed? A. I was employed by Gibbs & Cox, Incorporated, New York City.

Q. What is the business of Gibbs & Cox? A. They are naval architects and marine engineers.

* * * * *

(6) Q. In 1948 where did you go? A. I went to work for the United States Salvage Association here in New York.

Q. In fact, in this building; right? A. Right, in this building.

Q. And you were with the U.S. Salvage Company from 1948 until when? A. 1962, when I resigned.

Q. A period of 14 years.

What was your last position with U.S. Salvage? A. When I left U.S. Salvage, I was vice president of operations and chief engineer.

Q. What is the nature of the business that U.S. Salvage engages in? A. They are marine surveyors, both to owners, the federal government, all branches of the federal

*Excerpts from Deposition of William F. Watkins
Read into Record.*

government, (7) and to insurance companies; insurance underwriters.

Q. Since 1962, have you been self-employed as you have already told us as a professional engineer and marine surveyor and consultant? A. That is correct, from 1962 to present.

* * * * *

(9) * * * Q. Was your survey of the MV Piran on February 13, (10) 1968 particularly directed to the No. 1 hatch and the area around it? A. Yes, it was.

Q. Would you tell us what you observed when you went to the area of the No. 1 hatch. A. I found in general that the after hatch cover, pontoon-type cover, was lying on deck and badly buckled and the No. 5 hatch cover was slightly buckled, also lying on deck; that the after bulkhead or coaming of the hatch was set forward, distorted, and that the forward bulkhead of the winch house adjacent to it had been distorted.

Q. For the purposes of our questions, and for clarity, if anybody should read it, I am just going to repeat something that we all know.

Is it true that the hatch cover was made up of six steel units? A. The covering of the hatch was made up of six pontoon-type, as they describe them, hatch covers.

Q. And I notice that your report states that they were approximately—each one of them—five feet by 24 feet? A. That is correct.

Q. The long length, the 24 feet, did that go athwartship? A. Yes, it went athwartship.

(11) Q. So that, in effect, what you had was, starting at the bow end of the vessel, you had six steel units, one behind the other, covering the hatch with the long part of them stretching from side to side of the vessel? A. That is correct.

* * * * *

*Excerpts from Deposition of William F. Watkins
Read into Record.*

(20) Q. Did you examine the wall of the ship's housing, which was adjacent to the after end of the hatch coaming? A. I did.

Q. Did you find any markings on that wall? A. Yes, sir.

Q. In your opinion, what kind of an object caused those markings? A. It would be a solid object.

* * * * *

(21) * * * Q. Would you answer the question, Mr. Watkins. A. In my opinion, the damage to the coaming and the hatch cover was caused by being struck by a solid object and the damage to the forward end of the mast house was a combination of being struck by a solid object and the sea.

Q. Was there any solid object in the area that could have done the damage? A. I observed a solid object which could have done the damage.

(22) Q. And what was that? A. It was the mooring fender.

* * * * *

(23) Examination by Mr. Ryan:

* * * * *

Q. You were not present when depositions were taken aboard the vessel on February 13th? A. Not that I recall.

(24) * * * Q. What part of the No. 1 hatch did you examine? A. I examined all of the hatch.

Q. Did you go into the 'tween deck? A. No.

Q. Down below? A. No, sir.

Q. You did not go below deck? A. No.

Q. Did you go on the forecastle of the vessel? A. Yes, sir.

Q. Did you observe any damage there? A. No, sir.

*Excerpts from Deposition of William F. Watkins
Read into Record.*

Q. You did not? A. No.

* * * * *

(25) * * * Q. I would like you to refer to your survey report at the bottom of page 2 and the top of page 3 where you refer to the forward end of the mast/winch housing being heavily set aft. A. Right.

Q. And at page 3 it is your opinion that these forces were the result of seas coming across the deck and surging against the forward end of the mast/winch house in a somewhat downward direction; is that correct? A. That's what it says. Yes. sir.

Q. Is that your opinion now? A. Yes. That is still my opinion.

Q. These seas coming across the deck and surging against the forward end of the mast house in a somewhat downward direction, would they not also come across the deck and surge against the No. 6 and No. 5 pontoons placed in the hatchway? A. In my opinion, they would wash across the top of them, yes, on their way to the forward end of the mast/winch house.

Q. Where would the seas go after they hit the forward end of the mast/winch house; the forward bulkhead? A. Well, they would—of course, some of the water (26) would come out the side onto the deck port and starboard. Others would tumble forward. That is the only way they could go. They couldn't go the other way. They would have to go forward back over the hatch again, and then out to the side.

Q. Would it take a considerable mass of water, force of water, to indent or set in the forward plates of the mast house as you saw it? A. It would take a sizable force of water, yes.

* * * * *

(28) * * * Q. You also mentioned that the after coaming

*Excerpts from Deposition of William F. Watkins
Read into Record.*

of the hatch cover, I believe, was distorted in the center line.

Is that the condition found on page 2 of your report about the fifth paragraph on page 2? A. Yes. Buckled and distorted.

Q. I'm sorry, paragraph 6. After coaming was set forward over the top center area approximately three and a half inches? A. Page 2?

Q. Yes.

Mr. Leibell: This is the one here.

A. You mean examination of the hatch coaming of the No. 1 hatch revealed? That paragraph?

Q. Right. A. That is correct, yes.

Q. And you refer to center line.

(29) Is that the middle of the hatch coaming? A. It is the center in the athwartship ship direction of the hatch and also it is the center line of the vessel.

Q. I think your survey report also mentioned that water would, after striking the forward end of the mast house, would be forced in a downward direction and forward.

Is it possible that that water, after having hit the forward bulkhead of the mast house, would also strike the after coaming of the No. 1 hatch? A. Oh, yes.

* * * * *

(31) Q. Was the fender covered with ice when you saw it? A. On the outside. It had ice, snow on it. It was slushy snow.

Q. What did you do to examine the fender? A. To examine it?

Q. Yes. A. I just walked around it very closely.

* * * * *

*Excerpts from Deposition of William F. Watkins
Read into Record.*

By Mr. Ryan:

Q. Now, Mr. Watkins, I would like you to refer to page 3 of your survey report and the second paragraph starting on page 3.

You say in your opinion the mooring fender which (32) was stowed in the area between the after end of the hatch coaming and the forward end of the mast/winch house was lifted and thrust forward by the action of the seas and continually battered the hatch coaming resulting in the forward direction deformation; is that correct? A. That is correct.

Q. Is that the deformation in the center line that you referred to? A. Yes.

Q. Of the after hatch coaming? A. That is correct.

* * * * *

(34) * * * Q. Is it your testimony that this fender was up on top of the hatch coaming, or on top of the hatch cover? A. In my opinion, it was not only hitting the after end of the coaming, but it was on top of the hatch cover itself and pounding down on it.

Q. And this is on which hatch covers? A. No. 6.

Q. No. 6? A. The after one.

Q. Would it be your opinion that it was on No. 5? A. In my opinion, no, sir.

* * * * *

(37) * * * Q. So it is your testimony today, in spite of what you say in your report, that in your opinion this fender struck the after hatch coaming causing this deflection forward in the center line and also struck the No. 6 pontoon from above? A. That is correct.

* * * * *

(38) * * * Q. * * * I believe you stated it was your opin-

*Excerpts from Deposition of William F. Watkins
Read into Record.*

ion that the fender did not strike the No. 5 pontoon cover; is that correct? A. That's correct.

* * * * *

(40) * * * Q. Referring to the next sentence you say, in your opinion:

(41) "Water alone would not cause the hatch coaming to be distorted. As stated previously, the support shelf of the after side of the hatch, which shelf runs the full athwartship width of the hatch, was not damaged and remained intact."

Is that running from port to starboard athwartship?
A. No. The shelf fronts fore and aft.

Q. You say the support shelf of the after side of the hatch, which shelf runs the full athwartship width of the hatch, was not damaged and remained intact throughout, which is indicative, in your opinion, that this side of the hatch cover was buckled in a forward direction as stated above due to distortions of the hatch coaming caused by repeated strikings of the mooring fender.

Now, are you referring to the support shelf running athwartship on the after end of the hatch coaming from port to starboard or starboard to port? A. It doesn't run from port to starboard.

Q. This is your report, Mr. Watkins.

Mr. Leibell: This is what he is referring to.

A. This report was corrected because that athwartship, the shelf only runs for about a foot or 14 inches (42) on either side.

Q. Mr. Watkins, let's look at your report, all right? A. This was changed to reflect the true condition.

*Excerpts from Deposition of William F. Watkins
Read into Record.*

Q. On page 2 about the middle of the way down, the paragraph beginning: "It is to be noted, however . . ."

Do you have it? A. That's right.

Q. You say that the athwartship steel support shelf at the after end of the hatch coaming on the inside, which supports the after hatch cover for the full width of the hatch was unmarked and not damaged in any way; is that correct? A. That's what it says in that report.

Q. That's what it says in your report? A. But this report has been amended to reflect the conditions.

* * * * *

(44) * * * By Mr. Ryan:

Q. Mr. Watkins, I now have in front of me two survey reports which appear to be identical and are dated both April 6, 1968 and they both bear your signature.

What is the difference between the two reports?

Mr. Leibell: Get both of them in front of you now.

A. The difference reflects the structure of how the after end of the No. 1 hatch was made; was built.

Q. In what respects? A. In the report, this one, I state that the hatch shelf runs the full athwartship of the hatch.

Q. What does Exhibit 1A state?

Mr. Leibell: Exhibit 1A is this one, now.

A. It states that it runs for approximately one foot long.

Q. When did you make this corrected report, Exhibit 1A? A. I couldn't tell you. I don't remember, sir, when I did it.

*Excerpts from Deposition of William F. Watkins
Read into Record.*

(46) * * * Q. Let's now refer to the corrected copy and again going to the paragraph beginning: "It is noted," towards the middle of page 2, "that two approximately one foot long each athwartship steel support shelves on each side of the after end of the hatch coaming on the inside (which support the after hatch coaming for approximately one foot on each side of the hatch) were unmarked and not damaged in any way"; is that correct?
A. That's correct.

Q. That was your observation? A. Yes.

Q. Now, you referred to that again on page 3; is that correct? A. That's correct.

Q. And you say in your opinion the two support shelves at each end of the after coaming of the hatch were not damaged and remained intact, which is indicative, in your opinion, that this side—which side? Would that be the after side of the hatch cover? A. Yes. The after side of the hatch cover.

* * * * *

(47) * * * Q. If they were damaged, then it would have been the force of the water that caused the damage; is that correct? A. That's in my opinion, yes.

* * * * *

**Excerpts from Deposition of Samuel Korman
Read into Record.**

(3) * * * Examination by Mr. Leibell:

Q. Dr. Korman, where do you live? A. I live at 251 Adams Lane, Hewlett, Long Island, New York 11557.

Q. Dr. Korman, how many degrees have you received from institutions of higher learning, and what are they?
A. Three degrees.

I have a Ph. D. in chemistry and finance from Columbia University; a Masters degree in chemistry from Columbia University, and a Bachelor of Science degree from New York University.

Q. Would you detail your professional experience (4) over the years? A. I have approximately 30 years experience primarily of an industrial nature as a research metallurgist.

From 1946 to 1958 I was employed as a research metallurgist at Phelps-Dodge Corporation, Department of Development & Research.

During the same period, I had collateral independent consulting assignments in metallurgy.

From 1956 to 1959, for the United States Department of State, particularly on overseas assignments, interim assignments from time to time from 1949 to 1951 to the United States Atomic Energy Commission and the Department of the Interior.

From 1955 to 1959 for the Department of Defense.

From 1955 to 1961, I was Professor of Metallurgical Engineering at the Polytechnic Institute of Brooklyn.

From 1959 to 1961, I was Chief of Materials Development for Republic Aviation Corporation.

From 1961 to 1963, I was a full time consultant to the Board Chairman of the Ethyl Corporation in the materials and metals development, and, from 1964 to the present, I am Senior Research Professor, School of (5) Engineering at Columbia University.

*Excerpts from Deposition of Samuel Korman
Read into Rec d.*

I am a member of the American Society for Metals; The American Institute of Mining & Metallurgical Engineers; and, The Electrical Chemical Society; and I have been elected to the Honorary Scientific Societies of Sigma Psi Phi Lambda Epsilon, and, Epsilon Chi; and I am an author and/or co-author of—I should judge—over fifty papers and patents in the scientific and metallurgical field.

* * * * *

(11) * * * Q. (continuing)—Now, looking at this picture which has just been marked as Plaintiff's Exhibit 5 for identification, I represent to you that it is a picture of a damaged section of the No. 1 hatch cover on the MV Piran, and will you note, sir, that an area of that picture has already been circled by another witness, with ink? A. Yes, I see that.

Q. In looking at that picture of the damaged hatch cover section, and based upon your experience, can you say whether or not that damage could have been caused by wave action?

Mr. Ryan: Objection to the form of the question.

A. My answer would be "No." I would not expect it to be formed by the action of water in the form of a (12) wave.

Q. Looking at that picture again, sir, what kind of striking force do you believe would be necessary to cause that kind of damage?

* * * * *

A. That kind of damage, in my experience, is caused by highly localized action of a wave dropping right at the site of the buckling shown in the picture.

* * * * *

*Excerpts from Deposition of Samuel Korman
Read into Record.*

Examination by Mr. Ryan:

* * * *

(15) * * * Q. I understood you to say that you had various experiences of research metallurgical consulting.
A. (No response.)

Q. Have you ever been to sea? A. On one occasion, yes.

Q. What was that occasion? A. I took a cruise.

Q. On a passenger ship? A. Yes.

Q. To the Bahamas? A. Bermuda.

Q. Have you ever had occasion to examine hatch (16) pontoons or structural parts of an ocean-going vessel? A. No, sir.

Q. Have you ever been at sea when an ocean-going vessel encountered heavy weather? A. No, sir.

The Witness: Excuse me. Would you just, for my own benefit, define heavy weather?

Q. Well, let's say weather in which heavy waves or water comes over the bow and sides of a vessel. A. No, I have never encountered that.

Q. Have you ever examined any ocean-going vessels and their equipment and hatches that have suffered damage when such vessels went through heavy weather? A. No, sir.

* * * *

(20) * * * By Mr. Ryan:

Q. Now, just a few layman's questions as to Exhibit 2, since I am not a mathematician. Dr. Korman, on the first page of Exhibit 2 you include certain assumptions; the first assumption says, "W 1000 pound line contact load."

*Excerpts from Deposition of Samuel Korman
Read into Record.*

What does "line contact" mean? A. It means a line along which a load falling on this steel member would make contact with it.

Q. How definitive is that line? How definite? A sharp line? A. For purposes of application of the theory, it is a straight line and it's a sharp line; it is a geometric line.

* * * * *

(21) * * * By Mr. Ryan:

Q. The last sentence, "Bottom flanges are ignored in calculations."

What did the bottom flanges refer to? A. If you will look at the diagram you will see a statement; you will see the words, "Bottom flanges."

Mr. Ryan: I see.

Identified at the top of the page.

The Witness: That's right.

Q. Now, let's go to Mr. Leibell's page number 9.

Mr. Liebell: It's Dr. Korman's page number 9.

Mr. Ryan: All right, it's Dr. Korman's page number 9.

Q. Now, based on your assumptions, your statement (22) on page 1, you refer to a drop height of 60 inches.

Am I correct that according to your theory or calculations, or calculations on that theory, that it would take sixty drops to produce a 30 inch deflection? A. Sixty drops of a thousand pound weight dropping a height of 60 inches.

Q. And it would take ten drops from a height of 120. A. 120 inches for a thousand weight to produce a deformation.

*Excerpts from Deposition of Samuel Korman
Read into Record.*

Q. And seven drops from a height of 240 inches. A. That's right.

Q. 240 would be 20 feet. A. Twenty feet.

Q. Now, this area on which this drop would occur, according to your calculations that would be based on your assumption that a drop in the center of that No. 6 pontoon; is that correct— A. Yes.

Q. (continuing)— identified in Exhibit No. 5 photograph? A. That's right.

Q. Are these calculations based upon the assumption that this drop would be made from a straight, vertical (23) line? A. Yes.

Q. Now, going back to your report, Exhibit No. 1, Dr. Korman, I believe you testified that you were not on board the MV Piran and had never seen the vessel; is that correct? A. That's right.

* * * * *

(30) * * * Q. Did you have at your disposal, or did you review in making your calculations in this report, any other reports of survey or inspection of the MV Piran? A. None other than the report of Mr. Watkins.

Q. And you didn't see any plans of the vessel, any specifications? A. No, sir.

Q. It's limited to the photographs, Mr. Watkins' report, and the testimony of the master; am I correct? A. That's right.

* * * * *

**Excerpts from Deposition of James F. Lindsay
Read into Record.**

(4) * * * Examination by Mr. Leibell:

Q. Will you please state your name and address for the record. A. James F. Lindsay, 1 Woodruff Road, Morristown, New Jersey.

Q. Mr. Lindsay, are you a licensed professional engineer? A. I'm a licensed marine engineer.

Q. When were you licensed? A. I believe 1940, originally.

Q. Licensed by what authority? A. By United States Coast Guard.

Q. Are you a graduate naval architect? A. No sir.

Q. On February 13, 1968, did you go aboard the S.S. Piran in Bridgeport? A. That's right.

* * * * *

(8) Q. Now, further down on the same page 4, "Forward bulkhead of mast house aft of No. 1 hatch heavy set in between frames." A. Right.

Q. Was that conclusion of yours based upon a belief that the forward bulkhead of the mast house had been struck by a wave action? A. Oh, yes.

Q. Considering the position of the forward bulkhead of the mast house, would that indicate to you that the wave action came over the bow of the ship? A. The wave action, I would say, yes, it could have come from either quarter, but, I would say, generally speaking, it came from forward.

Q. Particularly, in view of your prior finding that the Jack staff was bent to a 45 degree angle in an aft position, is that correct? A. Well, of course, the Jack Staff could have been bent by another wave, but that particular wave that we're talking about, the damage that we're talking about now, on the forward side of the hatch, would be from a wave from forward aft.

*Excerpts from Deposition of James F. Lindsay
Read into Record.*

Q. Now, when a wave comes over the bow of the ship (9) and strikes the forward bulkhead of the mast house, which, I assume, is at a 90 degree angle to the deck—is that correct? A. Yes, that's correct.

Q. When the wave strikes that forward bulkhead of the mast house, is it true that the striking force of the wave is dissipated against that wall and the water then falls off in different directions? A. Not necessarily.

Q. What do you say does happen to the striking force of the wave after it strikes the wall? A. The point is that the wave could be so great that it can come down just directly, and that is, apparently, what it did.

Q. It could come down directly to the deck, is that correct? A. Yes.

Q. When it hits against the wall, the water can go off to the sides? A. That's right.

Q. Some of it can go directly down? A. That's right.

* * * * *

(14) * * * Examination by Mr. Ryniker:

Q. Mr. Lindsay, you testified, I believe, that you have a Coast Guard license? A. Yes sir.

Q. What grade of license is that? A. Chief engineer, any horsepower.

Q. Is that a steam license? A. Yes sir.

Q. Have you sailed as chief engineer? A. Yes. Two and a half years.

Q. When did you come ashore? (15) A. I was taken ashore. I didn't come ashore on my own free will, but I was taken ashore in 1943.

Q. When did you become involved in the marine survey business? A. 1943, when I came ashore, I was marine superintendent for States Steamship Company, from '43 to '52. In '52 I joined the office of Frank S. Martin & Sons. Of course, we did all kinds of surveys of marine equip-

*Excerpts from Deposition of James F. Lindsay
Read into Record.*

ment, dry docks, appraisals for just about anybody, ship-yard, owners, underwriters, independent surveyors.

Q. So you have been a surveyor continuously since 1943?
A. Yes.

* * * * *

Q. Did you, at any time when you were aboard the vessel, survey any of the cargo aboard? A. No. I was there to look at the hull.

Q. Did you, in the course of your inspection, have occasion to go down to any of the hatches? (16) A. I did. I went down into the lower No. 1 hold.

Q. You testified about the forward plating or forward mast house by No. 1 hatch. Can you tell me, sir, what the approximate thickness of that plating was? A. That's roughly, I would say, half-inch plating.

Mr. Ryniker: That's all I have.

Examination by Mr. Ryan:

Q. Mr. Lindsay, you testified to Mr. Ryniker's question that you sailed as a chief engineer, approximately, two and a half years. Did you have other sea experience?

A. Yes.

Q. How many years total? A. I sailed on American ships for a little better than eight years under different grades of licenses.

Q. In 1943 you came ashore, is that correct? A. That's right.

Q. How long did you work for States? A. I worked two and a half years prior to coming ashore, and I worked for States—at that time it was Pacific-Atlantic Steamship Company, but, anyway, then I worked '43 through '52.

Q. In 1952 you went with the firm of Frank S. Martin & Sons? (17) A. Yes.

Q. As a hull surveyor? A. Surveyor and appraiser.

*Excerpts from Deposition of James F. Lindsay
Read into Record.*

Q. How long were you with that company? A. Until Frank died, which was 1958.

Q. During that time, did you conduct surveys for cargo interests, ship owners, underwriters and at forth? A. Yes. Just about anything a private surveyor is expected to do.

Q. In 1958, what did you do? A. I hung up my own shingle in 1958. I set up my own business as a private consultant.

Q. You have been conducting hull and machinery surveys since 1958 as a self-employed individual surveyor? A. That is correct.

* * * * *

(20) Q. Now, I also show you another photograph. Does this fairly represent the forward wall of the No. 1 mast house as seen by you? And there's a bent pontoon. A. That's correct. That's a very good picture.

Mr. Ryan: Mark this Splosna's Exhibit 4.

(Picture marked Splosna's Exhibit 4 for identification.)

Q. I show you another photograph, and ask you is this a photograph of the No. 6 pontoon which was the after-most pontoon in the No. 1 hatch? A. This is as we saw it, yes. This is No. 1 hatch, as we saw it.

Mr. Ryan: Please mark this.

(Photograph marked Splosna's Exhibit 5 for identification.)

Q. I show you another photograph. Is that a photograph of the pontoon, No. 5, that was immediately forward of the No. 6, as seen by you on February 13, 1968? A. That's it, correct.

*Excerpts from Deposition of James F. Lindsay
Read into Record.*

Mr. Ryan: Mark it, please.

(Photograph marked Splosna's Exhibit 6 for identification.)

Q. Now, I show you another photograph. Is that a (21) representation of the forward bulkhead of the No. 1 mast house on the M/V Piran as seen by you when you inspected the vessel? A. Very clear; very good.

* * * * *

(23) * * * Q. Now, referring to the entry on page 4 of your report, "Main deck set down on port side, aft No. 1 hatch."

Will you describe that for us, Mr. Lindsay? A. Yes. The main deck was set down on the port side of No. 1 hatch at the seam and in line with the forward house. That is the plate seam.

Mr. Leibell: Do you have any pictures of that?

The Witness: I got pictures in my mind of that. I remember that very clearly, because all the strength members underneath there were disturbed.

Q. You also refer to a port longitudinal hatch beam. It's the next entry.

I show you two photographs. Is that the longitudinal hatch beam under the deck that you saw set down? A. This is it. There's a hatch beam right there (indicating). You can see where it is buckled. See where the paint is knocked off (indicating).

Mr. Ryan: Mark these 9-A and 9-B. 9-A will be a photograph of the port longitudinal hatch beam and the six deck head beams, taken from a position (24) starboard to port.

*Excerpts from Deposition of James F. Lindsay
Read into Record.*

Q. Let me ask you is that correct? A. That is correct.

Mr. Ryan: And 9-B is a photograph of the same hatch beam taken from a position port to starboard at an angle.

The Witness: You can see that the flat bar on the bottom is buckled.

(The above-described photographs were marked Splosna's Exhibits 9-A and 9-B for identification.)

Q. Now, Mr. Lindsay, from a review of the damages noted by you to the main deck of the vessel, the No. 5 and 6 pontoons, the No. 1 hatch, the forward bulkhead of the mast house, the after coaming of the vessel and the other damages that you noted at the forecastle of the vessel, based on your experience as a boat surveyor, can you state an opinion as to what caused the damages that you saw?

Mr. Leibell: Objection to the question being improper in form for a hypothetical question.

Q. You can answer the question. A. Well, my opinion is that probably one tremendous wave struck at one shot, it distorted your pontoons, which, of course, damaged your coaming and set the deck down. That (25) must have been tons of water. That must have been a big wave. The Jack staff could have been something completely separate, because that was heavy weather too. Ships have floundered—

* * * * *

(29) * * * Examination by Mr. Ryniker:

Q. What was the approximate thickness of the deck plating in the area where you indicated in your report that you determined it would be set down? A. 7/8 to one inch.

* * * * *

**Excerpts from Deposition of Rupert Benedikt
Read into Record.**

(74) RUPERT BENEDIKT, called as a witness by plaintiff, having been first duly sworn by the Notary Public (Mel Winter) testified as follows:

Examination by Mr. Prem:

Q. How long have you been going to sea? A. I was—I start 1949.

Q. 1949? A. With school. And during this time to go, I was five years in school, and then high school two years, seven years, and one military. Other times at sea. That will be about 12 years.

Q. I understand this voyage is the first one you had with this ship; is that true? A. Yes.

* * * * *

(82) * * * Q. You expect the seas to come over your ship's deck, don't you? A. No. Not so strong.

Q. In winter time— A. Yes, in winter time, I expect, but in this time I don't expect it will be so strong.

* * * * *

(97) Q. What is the thickness of the metal in the pontoon, did you ever measure that? A. Thickness.

Q. How thick was the metal? A. I don't know. That is made in Japan and the ship have class from Lloyds. I am not interested. Only if I see is rusty or in danger, then I can—order to change or repair. In any case is my life and crew's.

Mr. Prem: That's all.

The Witness: I don't go to sea with damage for my life. I have children, too, and wife.

* * * * *

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*Excerpts from Deposition of Rupert Benedikt
Read into Record.*

(100) * * * Examination by Mr. Ryan:

Q. Now, Captain, you also testified in answer to Mr. Prem's questions, that in a winter North Atlantic crossing you can expect some heavy weather; is that right? A. Yes, I know.

Q. Do you expect this heavy weather to be heavy enough to push in the pontoons covering?

* * * * *

(101) A. I don't expect anybody from crew, don't expect it.

Mr. Prem: Well, I object to that.

A. (Continuing) We have sailors on board 40 years old, and don't expect it, no.

* * * * *

(103) Examination by Mr. Ryan:

Q. Captain, you were on the bridge. Could you see forward; could you see the No. 1 hatch from the bridge? A. No, no. In daytime, is not possible, but at night, impossible. Daytime is not possible.

Mr. Peterson: It is possible.

The Witness: Because it is masthouse.

Mr. Peterson: Is in the way.

Q. It is in the way? A. Yes.

* * * * *

**Excerpts from Deposition of Rogelja Svonko
Read into Record.**

(6) * * * Direct Examination by Mr. Ryan:

Q. What is your name? A. Rogelja Svonko.

Q. What is your address? A. Would you like to know where I was born or where I am now?

Q. Where you reside now? A. TRG. I Maj 6, Piran.

Q. By whom are you employed? A. Splosna Plovba.

Q. And how long have you been employed by Splosna Plovba. A. I was aboard one of their ships so I was employed by them, the third month, that is March 11, 1956.

* * * * *

(7) * * * Q. In January and February of 1968 were you employed on the vessel named the Piran? A. Yes.

Q. When did you join the vessel Piran? A. I joined the vessel, 8/1/68. Which means January 8, 1968.

Q. Where did you join the vessel Piran? A. In Rotterdam.

Q. And what was the vessel doing in Rotterdam? A. It was under repairs.

Q. What were your duties on the Piran? A. I was a bosun.

Q. And as a bosun what did you do? A. I would like to know whether to go into details or just a little to say about it.

Q. Well, a general description of what your (8) duties were. A. It is my duty as a bosun, that I will be in charge of all the jobs on the deck as per order of chief mate, that I prepare work for the sailors, that I prepare their tools, that I give them work, that I control their work, that during movement of the vessel, in ports, my duty is on the bow, that I manipulate winch on the bow, that during tying of the vessel that I will come on with the sailors on the bow, that I will be present during opening and closing of the hatches.

*Excerpts from Deposition of Rogelja Svonko
Read into Record.*

The Interpreter: He is asking if I understand.

A. That before departure of the vessel to check whether all the hatches are properly closed and secured, that I check all the items on the deck, not only on the deck but also in other compartments whether it is tied and secured properly. That is basically it.

Q. When you joined the vessel, the Piran, in Rotterdam, did you see a fender stowed after the No. 1 hatch? A. Yes.

* * * * *

(9) * * * Q. Did you inspect the fender? A. Not only I checked the fender but I checked all the other items on deck.

* * * * *

(10) * * * Ask him what he saw.

Q. With respect to the fender, what did you see? A. What do you mean?

Q. How was it tied? A. It was tied according to regulation, it was tied good.

Q. Would you describe how it was tied? A. It was tied on both ends. There is an eye on top and there is an eye on the deck. It was tied four times around on both ends, left and right. And the bridle that you would lift, it was disconnected from the right side. It was put behind the web of the hatch and reconnected to the right-hand eye.

* * * * *

(12) * * * Q. Where did the vessel go to when it left Rotterdam? A. From Rotterdam to Bridgeport—not Bridgeport, Newport, Wales.

Q. Did it load cargo at Newport, Wales? A. Yes.

Q. When it left Newport, Wales, where was it bound for? A. When we departed from Newport, Wales, went to Bridgeport.

*Excerpts from Deposition of Rogelja Svonko
Read into Record.*

Q. When you sailed from Newport, did you check this fender and its lashings? A. It is not only that I did it then, I also did it when I left Rotterdam and not only this but everything else.

* * * * *

(13) * * * Q. What did you find when you inspected the lashings when you left Newport? A. That it was tied and that it was properly secured. I always check everything.

* * * * *

Q. Did you inspect the fender and its lashings at Bridgeport? A. I checked that before we arrived in Bridgeport.

The Interpreter: He said immediately after bad weather.

Q. What did you find?

* * * * *

(14) * * * A. This side is the right side. This cable was broken and this thick one remained intact. In other words, the left one, the thin left one and the thick one remained intact.

Q. So the thin wire on the right side or starboard side of the fender was broken? A. Yes.

Q. But the thin wire on the left side or port side of the fender was intact? A. Remained intact.

Q. And the thick wire, the thicker wire, was also intact? A. Yes, it was still unbroken, intact.

* * * * *

(16) * * * Q. Was the fender used at the time that the ship took on cargo at Newport? (17) A. We never used it.

Q. Was it used at Bridgeport? A. No.

* * * * *

*Excerpts from Deposition of Rogelja Svonko
Read into Record.*

(27) * * * Q. What is the approximate distance in the space which was occupied by that fender? A. As much as I remember, it was so wide that the fender just fit in.

* * * * *

(48) * * * Q. On the night in question when this hatch pontoon broke or collapsed, did your vessel have a lookout on board?

The Interpreter: I don't know the exact (49) word for lookout.

(The other Interpreter told him.)

A. Yes, on the bridge we had a quartermaster and the officer on the watch.

Q. A quarter master and an officer?

The Interpreter: Quartermaster being the one that was steering and the officer on the watch.

Q. But no lookout?

The Interpreter: You know the one that is on the bow and looks, as he said, who would stay on the bow. Excuse me to try to translate like that but just to show.

* * * * *

(56) * * * By Mr. Hayden:

Q. What other items were secured on the deck of the Piran during the voyage in question? A. It was one more fender, the same like this one.

Q. Where was that secured? A. Between 5 and 6.

Q. How was that secured? A. The same way.

*Excerpts from Deposition of Rogelja Svonko
Read into Record.*

Q. How many turns of wire were on that one? A. The thin one four times, the thinner one (57) four times.

Q. Did you secure that one? A. No. That was all tied before.

Q. Did any of those lines break? A. No.

Q. Was there anything else secured on deck? A. What I remember, nothing else.

Q. You testified at the beginning in response to a question by Mr. Ryan that this fender was tied according to regulations. What regulations are you referring to? A. That it is properly tied so the seas would not take it away.

* * * * *

**Excerpts from Deposition of Harvey Parker
McNeeley Read into Record.**

* * * * *

(4) * * * By Mr. Ryan:

Q. Mr. McNeely, would you state your full name for the record, please. A. Harvey Parker McNeely.

Q. And by whom are you presently employed? A. At the present time I am an independent surveyor, and on a fee basis I am surveyor for Bureau Veritas.

Q. How long have you been a surveyor? A. Since 1954.

Q. And is your profession that of a marine surveyor? A. Correct.

Q. Who have you done survey work for? A. I have done survey work as an independent for various companies, Bureau Veritas, nonexclusive. I have (5) represented the Salvage Association of London on many occasions, sometimes Lloyd's Register of Shipping, sometimes Germanica Lloyd, as well as the independents for various individual steamship companies.

* * * * *

(6) * * * Q. All right. Now, in connection with the repairs to the Piran, what did you do?

Mr. Prem: Off the record.

(Discussion off the record.)

A. In regard to the repairs to the Piran, I had been sent a copy of the survey report made at Bridgeport when she arrived at Bridgeport, when the survey was held, and my instructions from the New York office of Bureau Veritas were to the effect that I was to see that the repairs were carried out and that the vessel would be placed in her good seaworthy condition she was prior to her accident, and they sent a drawing of an approved plan

*Excerpts from Deposition of Harvey Parker
McNeeley Read into Record.*

of the particular hatch pontoons from the classification society in which she is in register, which was Lloyd's Register of Shipping. I (7) placed the repairs in hand and called in four contractors that were qualified to do this work and carry out the repairs, and we had competitive bids. Specifications were sent out almost in line with the survey made at Bridgeport with minor alterations in regard to materials that the owners may purchase or the repairs that were not necessary for the seaworthiness of the vessel at that particular time. It could have been deferred to a more convenient date.

* * * * *

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PLAINTIFF'S EXHIBIT 20--SURVEY REPORT OF WILLIAM F. WATKINS

Connecticut Office
236 Verna Hill Road
Fairfield

Connecticut Phone
Area Code 203
259-3488

William F. Watkins
Professional Engineer CT-5416
Marine Surveyor and Consultant
135 William Street
New York, N. Y. 10038
BEckman 3-8663

MYRON GEIST
I.F. EXP. 1A
DATE 9/3/74

April 6, 1968

File No. 1292

Subject: M/V "PIRAN"
On Behalf of Jordan International Corp.
Heavy Weather - February 8, 1968

REPORT OF SURVEY

Report of Survey made by the undersigned Surveyor on February 13, 1968, at the request of Messrs. Bigham, Englars, Jones & Houston, on the M/V "PIRAN", 10,879 Gross Tons, Splosova Plovba, Owners and Operators, while lying afloat at the plant of Messrs. Cilco Terminal Company, Inc., Bridgeport, Connecticut, in order to ascertain the nature and extent of damage alleged to have been sustained in consequence of the Vessel encountering heavy weather on February 8, 1968.

DESCRIPTION OF VESSEL:

The Vessel is of all steel construction, both riveted and welded, with raised forecastle deck and deck house aft containing the bridge and quarters. The machinery is located aft, and the main propulsion unit is an 8-cylinder Sulzer Engine Company diesel unit of approximately 7,200 B.H.P.

The Vessel is fitted with six (6) cargo holds and six (6) hatches on the main deck with the necessary king posts and mast/winch houses. The Vessel was built in 1959 by the Hakodate Dock Company, Hakodate, Japan, and has the following registered dimensions:-

Length - 490'-11"

Breadth - 64'-6"

Depth - 41'-6"

NARRATIVE:

It was reported that the Vessel encountered heavy weather on February 8, 1968, while enroute from Newport, Wales, to Bridgeport, Connecticut, loaded.

It was further reported that at the material time, the after hatch cover of the No. 1 Hatch on the main deck buckled and collapsed, and fell into and onto the tween deck; and that the next hatch cover forward buckled; and that the No. 1 Hold therefore became flooded.

FINDINGS:

When the undersigned Surveyor examined the No. 1 Hatch on the main deck, it was found that the hatch cover was made up of six (6) steel units, each, approximately 5' x 24", with the 5' dimension fore and aft, and the 24" dimension athwartships. The depth of the hatch covers was approximately 12" at the outboard ends and approximately 15" at the athwartship center.

FINDINGS: (continued)

resulting in a 3" camber. (The top of the hatch coamings also conformed to this camber to provide a flush fit for the covers)

The covers were made up of approximately 3/8" steel plate on the top, sides and ends, with the bottom of the side plating having an approximate 3½" flange and the bottom of the end plating having an approximate 4" flange. They were fitted with three (3) cross-ribs for the full depth and each with an approximate 2½" flange on the bottom. There was also a center longitudinal stiffener with an approximate 5½" "T"-flange on the bottom.

The covers, when in position, were recessed in the square of the hatch coaming in the normal manner resting on a steel support shelf so that each of the covers at the fore and after ends of the hatch were supported at their ends (port and starboard sides of the hatch) and on one (1) side for approximately 1' athwartships at each of the fore and after corners of the square of the hatch, and the four (4) covers in between were supported only at their ends (port and starboard sides of the hatch).

When ready for sea, the steel hatch covers on the main deck are covered with canvas tarpaulins secured in the usual manner with steel bar straps, wood wedges, etc., and then having a rope grid variously lashed fore and aft and athwartships overall.

An examination of the steel hatch covers revealed one (1) to be severely buckled and distorted in the center portion and the whole unit twisted with various areas of the top plating also buckled. The buckling and distortion of the unit as a whole was in a downward direction so that the angle formed by each of the ends to a horizontal plane was approximately 25 degrees. There was no rupturing or tearing of the metal observed, and none of the welding was observed to be fractured.

In addition, it was noted that one (1) other hatch cover was also buckled and distorted in the center portion, but to a considerably lesser degree than the hatch cover noted above. The overall buckling and distortion was also in a downward direction.

An examination of the hatch coamings of the No. 1 Hatch revealed that the after coaming was set forward bodily over the top center area approximately 3½". The top portion of the hatch coaming was of the normal construction of steel plate reinforced by a split-pipe half-round stiffener along the outside top edge. Within the square of the hatch, the hatch coaming internal surfaces at the after end of the hatch were heavily scored in a downward direction on the outboard sides.

It is to be noted however, that the two (2) approximately 1' long each athwartship steel support shelves on each side of the after end of the hatch coaming on the inside (which support the after hatch cover for approximately 1' on each side of the hatch) were unmarked and not damaged in any way.

The mast/winch house located at the after end of the No. 1 Hatch was observed to be severely damaged on the forward end for about the full athwartship width. The damage consisted of the house plating including the framing being set aft bodily, and also between vertical stiffeners, for about the full height.

The distance between the after end of the hatch coaming and the forward end of the mast/winch house is approximately 5', and the winch platform extends over this area to a point over the after end of the hatch, thus covering the area.

It was observed that a heavy mooring fender made up of wood poles interwoven with manila rope, and held together with cable and through bolts was stored just to port of the centerline of the after end of the No. 1 Hatch on the deck between the hatch coaming and the mast/winch house. The size of this mooring fender was approximately 30" diameter by 5' long. The fender was loosely secured to the lower portion of the hatch coaming by various lengths of wire rope and manila rope.

CONCLUSIONS:

In the opinion of the undersigned Surveyor, the cause of the buckling and collapse of the after hatch cover of the No. 1 Hatch followed by the buckling of the next hatch cover forward, was the result of the mooring fender (estimated to weigh in the order of 800 to 1,000 lbs.) stowed between the mast/winch house and the after coaming repeatedly striking the top of the hatch coaming from the action of the seas on deck.

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CONCLUSIONS: (continued)

As stated previously, the forward end of the mast/winch house was heavily set aft indicative of heavy forces acting thereon, and in the opinion of the undersigned Surveyor, these forces were the result of seas coming across the decks and surging against the forward end of the mast/winch house in a somewhat downward direction, for they either came across the 10' high raised forecastle deck or of necessity gained sufficient height to clear the sides of the Vessel to a degree permitting their carrying across the deck to the affected area.

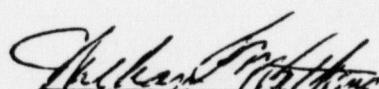
Further, in the opinion of the undersigned Surveyor, when the seas struck the forward end of the mast/winch house they were forced and directed in a downward direction due to the overhang of the top of the mast/winch house, and thence progressed in forward upward thrust towards the hatch coaming, and also in an athwartship direction to dispersal.

Therefore, in the opinion of the undersigned Surveyor, the mooring fender which was stowed in the area between the after end of the hatch coaming and the forward end of the mast/winch house was lifted and thrust forward by the action of the sea, and continually battered the hatch coaming resulting in the forward direction deformation; and this in turn caused the after end of the after hatch cover to also be distorted which distortion progressed across the hatch cover reducing its structural strength until the point was reached whence the weight of the seas caused the cover to be driven into the tween deck.

The hatch cover adjacent to and just forward of the after hatch cover, in the opinion of the undersigned Surveyor, was also structurally weakened when it was buckled (but to a much lesser degree of buckling) by the distorting and buckling in the after hatch cover, and coupled with the action of the seas as aforesaid.

It is to be noted that to set the after hatch coaming in a forward direction, the forces applied have to be in a forward direction which, in turn, tends to squeeze all of the hatch covers together resulting in considerable resistance to this type of movement, and, in the opinion of the undersigned Surveyor, the type of forces capable of this is the impact of repetitious heavy blows such as being pounded by an object such as the mooring fender which gradually forced the top of the hatch coaming forward and into the after hatch cover destroying its strength. In the opinion of the undersigned Surveyor, water alone would not cause the hatch coaming to be distorted. As stated previously, the two (2) support shelves at each of the after corners of the hatch were not damaged and remained intact which is indicative, in the opinion of the undersigned Surveyor, that this side of the hatch cover was buckled in a forward direction as stated above due to distortions of the hatch coaming caused by repeated strikings of the mooring fender; for, it is further the opinion of the undersigned Surveyor, that had this not been the cause and it was just the weight of the water which caused the collapse, then the two (2) support shelves would have been damaged on the after athwartship sides of the coaming in the square of the hatch, the after athwartship side of the hatch cover would have been crushed together with other portions thereof and the hatch coaming would not have been set forward.

Survey made without prejudice.


William F. Watkins
Surveyor

A 120

PLAINTIFF'S EXHIBIT 22--SURVEY REPORT OF DR. SAMUEL KORMAN

Columbia University in the City of New York | New York, N.Y. 10027

CHEMICAL ENGINEERING RESEARCH LABORATORIES
OF THE SCHOOL OF ENGINEERING & APPLIED SCIENCE

632 West 125th Street
UNiversity 5-8400

February 22, 1972

Mr. Herbert Prem,
Bigham Englar Jones and Houston,
99 John Street,
New York, N.Y.

Re: M/V Piran

Dear Mr. Prem:

I have had the opportunity of reviewing the information which you made available relative to the damages sustained by the M/V Piran on Feb. 8, 1968, resulting in flooding of its No. 1 Hold. As a result of this review, I can describe the sequence of events which I believe caused this flooding.

According to the depositions of the ship officers, the Piran encountered heavy seas during the North Atlantic crossing in question. Apparently the storm was particularly severe from 6 P.M. to midnight, Feb. 8, 1968. Large waves broke over the prow of the vessel during this period. It is not uncommon that such waves can be as much as 20 to 40 feet in height from trough to crest.

It is also known that a 1000-lb mooring fender was loosely lashed somewhere aft of the No. 1 hatch during the storm. This object is roughly cylindrical, 30" in diameter by 5 feet long, and is basically a bundle of wood poles covered and lined with rope and held together with cable and through bolts. Such an object is undoubtedly buoyant and could be floated by water.

The hatch cover consisted of 6 sections of 3/8" steel plate, 5 ft x 24 ft, reinforced by 3/8" side plates, 12" to 15" wide, and a flanged longitudinal center stiffener with three full-depth cross members on each section. These sections covered the hatch, and were supported by fore-to-aft side shelves. According to photographs these shelves curved around for a short distance at the hatch corners to provide some side support to the first and sixth sections.

A 121

Plaintiff's Exhibit 22

Mr. Herbert Prem

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Feb. 22, 1972

When assembled after loading, the sections were covered with a triple layer of canvas tarpaulin, secured by steel belts around the hatch coaming and held in place by wood battens and a heavy rope net.

We now consider the motion of the vessel relative to the waves during the height of the storm. Heading into the trough of each of a continuing succession of waves, the prow is directionally at approximately right angles and downward into the wave. The sections of hatch cover are jammed together toward the forward direction, so that the aft (sixth) section, like the others (except the very forward-most) is suspended by the port and starboard shelves only.

As the vessel moved into the trough of a large wave and started to change angle upward toward the crest, a relatively large wall of water washed over the prow. One such mass, reaching the mast/winch house just aft of the No. 1 Hatch, floated the mooring fender to a maximum height above the deck and carried it forward above the No. 1 hatch.

As the ship emerged from the wave trough and headed upward but, by now, under the wave crest which had broken over the prow, the water fell away rapidly in all directions. The mooring fender, in a buoyant position and afloat for this brief moment above the No. 1 hatch, came down with force centrally upon the aft cover sections. Depending upon the force involved in this impact, a deformation of the plate of the sixth section (and at least once, of the fifth section as well) was produced.

The mooring fender lay over the central area of impact, and as each succeeding wave rebounded from the mast/winch house, it re-floated the mooring fender so that a succession of heavy impacts occurred, each contributing to increasing the deformation and buckling of the sixth section, until, when the deformation reached approximately 30 inches normal to the original baseline, the section fell to the tween deck below.

The mooring fender, subsequently re-floated, having been prevented from falling into the hold by the rope net and tarpaulins, was washed backward into the deck space between the mast/winch house and the hatch coaming.

Loss of the section contributed to loss of support against damage caused by impacts of the fender with the hatch coaming.

Mr. Herbert Prem

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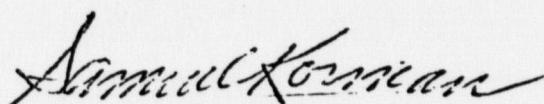
Feb. 22, 1972

Although no statements concerning the tarpaulins were available, it seems likely that deformation of the aft hatch coaming contributed to loosening of the battens and steel belting, so that the tarpaulins were at least washed aside, if not already ripped, creating open area in the hatch to permit free entry of water into the hold during the remainder of the storm.

Testimony in the depositions suggested that the hatch section was deformed as a result of the impact of heavy waves alone. This is not likely because the force of such impacts would not be sufficiently localized to create the type of buckling observed. Furthermore, for a vessel in North Atlantic service one would expect that the construction of the hatch cover sections had been considered suitable for sustaining water loading in severe storms, as indeed the integrity of the remaining hatch sections demonstrated.

It is my opinion that the sequence of events described above, wherein the action of successive re-floating by large waves, of a loosely secured mooring fender, alternated with centrally localized impacts upon the hatch section in question, resulted in cumulative deflections and buckling deformation to the point where the section lost support and fell into the hold. The fender also impacted repeatedly against the aft hatch coaming to loosen the battens and steel belting to an extent sufficient to facilitate washing aside and possibly ripping the canvas covers and permit the unimpeded access of water into the hold.

Very truly yours,



Samuel Korman, Ph.D.

A 123

DEFENDANT'S EXHIBIT E--LOG TRANSLATIONS FROM
JANUARY 31, 1968 THROUGH FEBRUARY 10, 1968

Wednesday, January 31, 1968

At 0000 works on securing the cargo continue.

0145 Stevedores off the ship.

0505 Testing telegraph and rudder. 0530 Pilot on board.

0550 The Tug "LLAHVERN" made fast forward. 0552 the Tug "ST. WOOLOS" made fast by stern.

0553 Stand by engine.

0558 Let go forward and after, 0625 Let go Tug forward.

0636 Let go Tug astern made fast in the dock.

0640 Finish with engine, alongside port side to in the lock.

Exchanged pilots.

0650 Tugs "DUNCURLEW" and "DUNFALCON" made fast forward. 0653 Stand by engine, let go moorings forward and after; manuevering out of the lock.

0715 Let go Tugs.

0855 Pilot off - 0900 finished with engine.

The weather is rainy, with strong westerly wind and sea. The ship is rolling and pitching heavily, and losing speed.

The crew is clearing the deck and closing hatches.

It is impossible to ventilate the cargo.

During the watch from 2000 - 2400 clocks retarded 20 min.

A 124

Defendant's Exhibit E

Thursday, February 1, 1968

During the watch from 0000 - 0400 clocks retarded 20 mins.

During the watch from 0400 - 0800 clocks retarded 20 mins.

In the morning hours the SW and W wind getting stronger and reached 7 - 8 force. The sea from same direction force 7. The ship is pitching and rolling heavily.

Sea shipping over deck and hatches.

Later wind becomes NW-ly force 8 - 9 B. The ship is losing speed. Impossible to sound tanks and bilges.

Given order to engine room to pump out from time to time tanks and bilges.

Ventilating of cargo impossible.

The crew is washing paint in the inner passages.

Friday, February 2, 1974

In the morning hours NW-ly wind force 8 B.
The sea from same direction force 7. The ship is
pitching and rolling heavily. Shipping sea over
all the deck and hatches. The ship is losing speed.
It is impossible to sound tanks and bilges and
therefore ordered to engine room to pump them
out from time to time.

In the afternoon the weather is improving.

I am declining every responsibility from the command,
crew and the owner for the damage which might
have been caused to the cargo or the vessel,
attributing same to force majeur and retaining
the right to file Sea Protest and enlarging it
at a convenient place and time.

The crew is washing paint in the inner
passages of the ship.

It is impossible to ventilate the cargo.

During the watch from 2000 - 2400 clocks retarded
20 mins.

A 126

Defendant's Exhibit E

Saturday, February 3, 1968

During the watch from 0000 - 0400 clocks retarded 20 mins.

During the watch from 0400 - 0800 clocks retarded 20 mins.

Sailing over the Northern Atlantic.

Strong SW-ly wind which in the afternoon reaches the force 9 B. High seas from SW shipping over the deck and hatches. The ship is rolling and pitching heavily, losing speed. In the afternoon light rain.

Ventilating of the cargo is impossible.

The crew is scrapping rust and painting decks of TD.

A 127

Defendant's Exhibit E

Sunday, February 4, 1968

Sailing in the Northern Atlantic.

Light N-ly wind with long moderate swell from NW. The sky is cloudy, in the evening light rain. The ship is rolling heavily and shipping seas on both sides.

The ventilation of cargo owing to the sea and rain is impossible.

The crew is idle - Sunday.

In the afternoon received radiogram from FEDNAV that first port of discharge is Bridgeport and not Camden.

During the watch from 2000 - 2400 clocks retarded 20 mins.

A 128

Defendant's Exhibit E

Monday, February 5, 1974

Sailing the Northern Atlantic.

During the watch from 0000 - 0400 clocks retarded 20 mins.

During the watch from 0000 - 0400 clocks retarded 20 mins.

During the day the wind from SW increases to 6,
also the sea. The sky is cloudy, intermittent light
rain. The sea shipping over deck and hatches. The ship
is rolling heavily and losing speed.

The ventilation of cargo owing to sea and rain
impossible.

The crew is engaged in scrapping and painting
decks of TD.

A 129
Defendant's Exhibit E

Tuesday, February 6, 1968

Sailing in the Northern Atlantic.

At 1000 entering fog. Required fog signals sounded, radar on until 1130.

SE-ly wind, which after the front passes shifts to NW and increases force to 4 B. Swell from SW 3 - 5.

In the morning and in the evening light rain, fog during the day, the temperature is considerably lower.

The ship is rolling on the swell and shipping water on both sides.

The cargo is ventilated during the day.

The crew is scrapping rust and painting decks of the TD and washing paint on the bridge.

In the watch from 2000 - 2400 clocks retarded 20 mins.

A 130

Defendant's Exhibit E

Wednesday, February 7, 1968

During the watch from 0000 - 0400 clocks retarded 20 mins.

During the watch from 0400 - 0800 clocks retarded 20 mins.

Sailing in the Northwestern Atlantic.

Moderate wind, owing to SW-ly swell, the ship is
rolling lightly.

The crew is washing paint on the ship's superstructure
and scrapping rust and painting TD decks.

The cargo is ventilated naturally.

A 131

Defendant's Exhibit E

Thursday, February 8, 1968

In the afternoon the SE-ly wind becomes much stronger. At 1600, owing to heavy pitching and rolling, the ship changes course to move favourable sourthern direction and the speed is reduced to 3 knots.

In the evening, the wind and sea is getting stronger from SE-ly and SW-ly direction.

In the evening the wind and sea reach force 10 B.

Shipping sea all over the deck and hatches.

The ship is pitching heavily and rolling.

The crew intensifies the watch.

The cargo is not ventilated, the bilges are pumped out.

During the watch from 2000 - 2400 clocks retarded 20 mins.

A 132

Defendant's Exhibit E

Friday, February 9, 1968

During the watch from 0000 - 0400 clocks retarded 20 mins.

During the watch from 0400 - 0800 clocks retarded 20 mins.

After the midnight, the wind and the sea from S-ly direction decreases rapidly. At 0300 the ship's course is changed back to original. In the morning hours, during the check up of the deck and hatches, it was noted, that on the hatch # 1 the last hatch cover was broken from the strikes of the waves, and it was stopped in tweendeck. The next hatch cover was only bent, but remained in its position.

In the hold it was noted about 2 - 3 in sea water, reaching the top of steel coils. There were noted few minor damages on the deck.

At 0700 the wind shifts to W-NW and at 1200 reaches again force 8 - 9 B.

It is not possible to close hatch # 1, but it is continued with reduced speed and constant pumping out of # 1 hold. The other bilges and tanks can not be sounded. The cargo is not ventilated.

During the afternoon the wind and the sea decreases in force.

The master declines from himself, the crew and the owner every responsibility for the damage to the cargo and the ship, attributing the case to force majeur and retains the right to file Sea Protest, enlarging it, at the most convenient place and time.

The crew keeps intensified watch.

A 133
Defendant's Exhibit E

Saturday, February 10, 1968

Sailing towards Bridgeport.

2033 Stand by engine.

2045 Pilot on board (WINANCORT)

2128 The Tug "OCEAN PRINCE" made fast forward.

2130 The Tug "CHAMPLAIN" made fast by stern.

2155 The bow made fast. 2157 The stern made fast.

2200 F. W. E.

2205 Let go tugs forward and after.

2215 Pilot off. Alongside pier "CILCO TERMINAL", port side to,
at Bridgeport.

Draft on arrival F 31' 11" M 30' 06".
A 29' 01"

At 2330 Authorities on board. Arranging formalities.

The crew was engaged with preparations for arrival, with
mooring the ship and other odd jobs on the deck.

Strong W-ly wind. Temperatures are low - freezing.

Bilges in # 1 hold still being pumped out.

A 134

ONLY COPY AVAILABLE

DEFENDANT'S EXHIBIT F--BILGE SOUNDING BOOK
PAGES COVERING JANUARY 31, 1968 - FEBRUARY 10, 1968

Dan i sat opažanja:

Izmjerena gustoća vode	
Nagnuće broda	
Srednji gaz u slatko-slankastoj vodi	P K
Srednji gaz u morskoj vodi	P K
Višak za slatko-slankastu vodu (Fresh water allowance)	

Knjiga stanja tankova - stonova

Dan 31. I.			u sati 0800
TANKOVI Balastna, pitka i napojna voda			Stonovi
broj	broj	broj	broj
1 L 5	L	FP	1 L 15
D 4	C		D 12
L 2	D	AP	2 L 11
C	L		D 10
D 3	C		3 L 12
L 4	D		D 10
C			4 L 2
D 5			D 12
L 4			5 L 12
C			D 12
D 3			6 L 6
L —	DT L JV	L JV	D 6
C	D 2	D JV	D 6
D	DT L	L	7 L
L	D JV	D JV	D
C	DT L	L	8 L
D	D	D	D

Za stroj: zatraženo pumpanje ili ispumpavanje:

u sati	zatraženo	predio
	53.7	
	56.6	
	42.2	
	152.5	

Ako traženje nije izvršeno - uzrok:

I. časnik:

NB. Nagnuće broda uzimali u račun:

Pri iscjedivanju (ispumpav.) tankova - stonova i pri završetku ukrcaja.

A 135

Defendant's Exhibit F

ONLY COPY AVAILABLE

Dan i sat opažanja:

Izmjerena gustoća vode	
Nagnuće broda	
Srednji gaz u slatko-slankastoj vodi	P K
Srednji gaz u morskoj vodi	P K
Višak za slatko-slankastu vodu (Fresh water allowance)	

Knjiga stanja tankova - stonova

Dan	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.	26.	27.	28.	29.	30.	31.	32.	33.	34.	35.	36.	37.	38.	39.	40.	41.	42.	43.	44.	45.	46.	47.	48.	49.	50.	51.	52.	53.	54.	55.	56.	57.	58.	59.	60.	61.	62.	63.	64.	65.	66.	67.	68.	69.	70.	71.	72.	73.	74.	75.	76.	77.	78.	79.	80.	81.	82.	83.	84.	85.	86.	87.	88.	89.	90.	91.	92.	93.	94.	95.	96.	97.	98.	99.	100.	101.	102.	103.	104.	105.	106.	107.	108.	109.	110.	111.	112.	113.	114.	115.	116.	117.	118.	119.	120.	121.	122.	123.	124.	125.	126.	127.	128.	129.	130.	131.	132.	133.	134.	135.	136.	137.	138.	139.	140.	141.	142.	143.	144.	145.	146.	147.	148.	149.	150.	151.	152.	153.	154.	155.	156.	157.	158.	159.	160.	161.	162.	163.	164.	165.	166.	167.	168.	169.	170.	171.	172.	173.	174.	175.	176.	177.	178.	179.	180.	181.	182.	183.	184.	185.	186.	187.	188.	189.	190.	191.	192.	193.	194.	195.	196.	197.	198.	199.	200.	201.	202.	203.	204.	205.	206.	207.	208.	209.	210.	211.	212.	213.	214.	215.	216.	217.	218.	219.	220.	221.	222.	223.	224.	225.	226.	227.	228.	229.	230.	231.	232.	233.	234.	235.	236.	237.	238.	239.	240.	241.	242.	243.	244.	245.	246.	247.	248.	249.	250.	251.	252.	253.	254.	255.	256.	257.	258.	259.	260.	261.	262.	263.	264.	265.	266.	267.	268.	269.	270.	271.	272.	273.	274.	275.	276.	277.	278.	279.	280.	281.	282.	283.	284.	285.	286.	287.	288.	289.	290.	291.	292.	293.	294.	295.	296.	297.	298.	299.	300.	311.	312.	313.	314.	315.	316.	317.	318.	319.	320.	321.	322.	323.	324.	325.	326.	327.	328.	329.	330.	331.	332.	333.	334.	335.	336.	337.	338.	339.	340.	341.	342.	343.	344.	345.	346.	347.	348.	349.	350.	351.	352.	353.	354.	355.	356.	357.	358.	359.	360.	361.	362.	363.	364.	365.	366.	367.	368.	369.	370.	371.	372.	373.	374.	375.	376.	377.	378.	379.	380.	381.	382.	383.	384.	385.	386.	387.	388.	389.	390.	391.	392.	393.	394.	395.	396.	397.	398.	399.	400.	401.	402.	403.	404.	405.	406.	407.	408.	409.	410.	411.	412.	413.	414.	415.	416.	417.	418.	419.	420.	421.	422.	423.	424.	425.	426.	427.	428.	429.	430.	431.	432.	433.	434.	435.	436.	437.	438.	439.	440.	441.	442.	443.	444.	445.	446.	447.	448.	449.	450.	451.	452.	453.	454.	455.	456.	457.	458.	459.	460.	461.	462.	463.	464.	465.	466.	467.	468.	469.	470.	471.	472.	473.	474.	475.	476.	477.	478.	479.	480.	481.	482.	483.	484.	485.	486.	487.	488.	489.	490.	491.	492.	493.	494.	495.	496.	497.	498.	499.	500.	501.	502.	503.	504.	505.	506.	507.	508.	509.	510.	511.	512.	513.	514.	515.	516.	517.	518.	519.	520.	521.	522.	523.	524.	525.	526.	527.	528.	529.	530.	531.	532.	533.	534.	535.	536.	537.	538.	539.	540.	541.	542.	543.	544.	545.	546.	547.	548.	549.	550.	551.	552.	553.	554.	555.	556.	557.	558.	559.	560.	561.	562.	563.	564.	565.	566.	567.	568.	569.	570.	571.	572.	573.	574.	575.	576.	577.	578.	579.	580.	581.	582.	583.	584.	585.	586.	587.	588.	589.	590.	591.	592.	593.	594.	595.	596.	597.	598.	599.	600.	601.	602.	603.	604.	605.	606.	607.	608.	609.	610.	611.	612.	613.	614.	615.	616.	617.	618.	619.	620.	621.	622.	623.	624.	625.	626.	627.	628.	629.	630.	631.	632.	633.	634.	635.	636.	637.	638.	639.	640.	641.	642.	643.	644.	645.	646.	647.	648.	649.	650.	651.	652.	653.	654.	655.	656.	657.	658.	659.	660.	661.	662.	663.	664.	665.	666.	667.	668.	669.	670.	671.	672.	673.	674.	675.	676.	677.	678.	679.	680.	681.	682.	683.	684.	685.	686.	687.	688.	689.	690.	691.	692.	693.	694.	695.	696.	697.	698.	699.	700.	701.	702.	703.	704.	705.	706.	707.	708.	709.	710.	711.	712.	713.	714.	715.	716.	717.	718.	719.	720.	721.	722.	723.	724.	725.	726.	727.	728.	729.	730.	731.	732.	733.	734.	735.	736.	737.	738.	739.	740.	741.	742.	743.	744.	745.	746.	747.	748.	749.	750.	751.	752.	753.	754.	755.	756.	757.	758.	759.	760.	761.	762.	763.	764.	765.	766.	767.	768.	769.	770.	771.	772.	773.	774.	775.	776.	777.	778.	779.	780.	781.	782.	783.	784.	785.	786.	787.	788.	789.	790.	791.	792.	793.	794.	795.	796.	797.	798.	799.	800.	801.	802.	803.	804.	805.	806.	807.	808.	809.	810.	811.	812.	813.	814.	815.	816.	817.	818.	819.	820.	821.	822.	823.	824.	825.	826.	827.	828.	829.	830.	831.	832.	833.	834.	835.	836.	837.	838.	839.	840.	841.	842.	843.	844.	845.	846.	847.	848.	849.	850.	851.	852.	853.	854.	855.	856.	857.	858.	859.	860.	861.	862.	863.	864.	865.	866.	867.	868.	869.	870.	871.	872.	873.	874.	875.	876.	877.	878.	879.	880.	881.	882.	883.	884.	885.	886.	887.	888.	889.	890.	891.	892.	893.	894.	895.	896.	897.	898.	899.	900.	901.	902.	903.	904.	905.	906.	907.	908.	909.	910.	911.	912.	913.	914.	915.	916.	917.	918.	919.	920.	921.	922.	923.	924.	925.	926.	927.	928.	929.	930.	931.	932.	933.	934.	935.	936.	937.	938.	939.	940.	941.	942.	943.	944.	945.	946.	947.	948.	949.	950.	951.	952.	953.	954.	955.	956.	957.	958.	959.	960.	961.	962.	963.	964.	965.	966.	967.	968.	969.	970.	971.	972.	973.	974.	975.	976.	977.	978.	979.	980.	981.	982.	983.	984.	985.	986.	987.	988.	989.	990.	991.	992.	993.	994.	995.	996.	997.	998.	999.	1000.

Ako traženje nije izvršeno - uzrok:

I. časnik: *M. Češić*

NB. Nagnuće broda uzimali u račun:
 Pri iscjedivanju (ispumpav.) tankova - stonova i
 pri završetku ukrcaja.

Dan i sat opažanja:

Izmjerena gustoća vode	24
Nagnuće broda	
Srednji gaz u slatko-slankastoj vodi	P K
Srednji gaz u morskoj vodi	P K
Višak za slatko-slankastu vodu (Fresh water allowance)	

Knjiga stanja tankova - stonova

Dan 22.6.64 u sati 14.00		TANKOVI Balastna, pitka i napejna voda		Stonovi
broj	broj	broj	broj	
1 L	L	FP	1 L	
D	C		D	
L	D	AP	L	
C	L		D	
D	C		L	
L	D		D	
C			L	
D			D	
L				8888888888
4 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
5 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
6 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
7 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
8 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
9 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
10 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
11 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
12 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
13 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
14 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
15 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
16 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
17 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
18 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
19 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
20 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
21 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
22 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
23 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
24 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
25 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
26 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
27 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
28 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
29 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
30 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
31 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
32 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
33 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
34 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
35 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
36 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
37 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
38 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
39 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
40 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
41 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
42 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
43 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
44 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
45 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
46 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
47 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
48 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
49 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
50 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
51 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
52 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
53 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
54 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
55 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
56 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
57 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
58 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
59 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
60 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
61 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
62 C			L	
D			D	
L	DT	L	L	
C	D		D	
D	DT	L	L	
L	D		D	
63 C			L	
D			D	

A 137 ONLY COPY AVAILABLE
Defendant's Exhibit F

Dan i sat opažanja:

Izmjerena gustoća vode	5.5
Nagnuće broda	
Srednji gaz u slatko-slankastoj vodi	P K
Srednji gaz u morskoj vodi	P K
Višak za slatko-slankastu vodu (Fresh water allowance)	

Knjiga stanja tankova - stonova

Dan 3.2.64 u sati 6/6			Stonovi
TANKOVI Balastna, pitka i napojna voda			
broj	broj	broj	broj
1 L 15	L	FP 62	1 L
D 15	C		D
2 L 3	D	AP 62	2 L
C	L		D
3 D 5	C		3 L
L 4	D		D
C			L
4 D 3			D
L 5			
4 C			L
D 3			D
L 5			
5 C			D
D 3			
L —	DT L	L 162	6 L
C	D	D 162	D
D	DT L	L 162	7 L
L	D	D	D
6 C	DT L	L	8 L
D	D	D	D
Pitka voda			
5 C	DT L	L 162	6 L
D	D	D	D
L	DT L	L 162	7 L
D	D	D	D
6 C	DT L	L	8 L
D	D	D	D
Za stroj: zatraženo pumpanje ili ispumpavanje:			
u sati	zatraženo	predio	
	36.6		
	44.9		
	44.9		
	126.4		
Ako traženje nije izvršeno - uzrok:			

NB. Nagnuće broda uzimati u račun:

Pri iscjedivanju (ispumpav.) tankova - stonova i pri završetku ukrcaja.

1. časnik: *Stojanović*

Dan i sat opažanja:

Izmjereni gustoća vode		3.5.5.
Nagnutje broda		
Srednji gaz u slatko-slankastoj vodi	P	K
Srednji gaz u morskoj vodi	P	K
Višak za slatko-slankastu vodu (Fresh water allowance)		V

NB. Nagnuće broda užimati u račun:

Pri iscjedivanju (ispumpav.) tankova - stonova i pri završetku ukrcaja.

Knjiga stanja tankova - stonova

Dan	4.2.44	u sati	čas
TANKOVI Balastna, pitka i napojna voda			Stonovi
broj	broj	broj	broj
1 L ✓ D 8	L C	FP ✓	1 L ✓ D 8
2 L ✓ C	D L	AP 60	2 L ✓ D ✓
3 D ✓ L 4	8 C D	.	3 L ✓ D ✓
4 C D 3		.	4 L ✓ D ✓
5 L 3 C		Pitka voda	5 L ✓ D 3
6 D L	DT L 30 D ✓	L ✓ D 140	6 L ✓ D ✓
7 C	DT L D	L 118 D	7 L D
8 D	DT L D	L D	8 L D

Za stroj: zahtjevno pumpanje ili ispuštanje;

u sali	zatraženo	predio
	sig i	
	3 p i	
	4 i 7	
	119-07	

Ako traženje nije izvršeno - uzrok:

I. častník: Martin Špaček

Dan i sat opažanja:

Izmjerena gustoća vode	1.5.8	
Nagnuće broda		
Srednji gaz u slatko-slankastoj vodi	P	K
Srednji gaz u morskoj vodi	P	K
Višak za slatko-slankastu vodu (Fresh water allowance)		

8/11
11/11

NB. Nagnuće broda uzimati u račun:
pri iscjedivanju (ispumpav.) tankova - stonova i pri završetku ukrcaja.

Knjiga stanja tankova - stonova

Dan 5.2.63 u sati 13.00

TANKOVI Balastna, pitka i napojna voda			Stonovi
broj	broj	broj	broj
1 L 5	L	FP	1 L 15
D 5	C		D 5
L 5	D	AP	L 15
2 C	L		D 15
D 5	C		L 15
L 5	D		D 5
3 C			L 15
D 5			D 5
L 5			8888888888
4 C			L 15
D 5			D 5
L 5			
5 C	DT L 15	L 15	L 15
D	D	D	D
L	DT L	L	L
D	D	D	D
6 C	DT L	L	L
D	D	D	D

Za stroj: zatraženo pumpanje ili ispumpavanje:

u sati	zatraženo	predio
	294	
	334	
	334	
	096.2	

Ako traženje nije izvršeno - uzrok:

I. časnik: *Ustaša*

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Defendant's Exhibit F

Dan i sat opažanja:

Izmjerena gustoća vode	
Nagnuće broda	P K
Srednji gaz u slatko-slatkastoj vodi	P K
Srednji gaz u morskoj vodi	
Višak za slatko-slatkastu vodu (Fresh water allowance)	

Knjiga stanja tankova - stonova

Dan	TANKOVI Balastna, pitka i napojna voda	Stožni broj	
broj	broj	broj	
1 L J D J	L C	FP 6 AP 6	1 L 11 D 11
2 C	D L		2 L 11 D 11
D S	8 C		3 L 10 D 11
L V	D		
3 C			4 L 10 D 11
D 3			
L J			
4 C			5 Pitka voda D 11
D 3			L 11 D 11
L C	DT L 20 D 0	L 11 D 11	6 L 11 D 11
D	DT L D	L 11 D 11	7 L D
L C	DT L D	L 11 D	8 L D

Za stroj: zatraženo punjanje ili ispuštanje:

u sati	zatraženo	predio
	32.6	
	27.7	
	34.1	
	33.8	

Ako traženje nije izvršeno uzrok:

NB. Nagnuće broda uzimali u račun:
pri ispuštanju (ispumpav.) tankova - stonova i
pri završetku ukrcaja.

I. časnik:

M. L. J.

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Defendant's Exhibit F

in i sat opažanja:

zmjerena gustoća vode

Nagnuće broda

Srednji gaz u slatko-slankastoj vodi

Srednji gaz u morskoj vodi

Višak
za slatko-slankastu vodu
(Fresh water allowance)

Knjiga stanja tankova - stonova

Dan 7.2.68 u sati 0800			
TANKOVI			
Balastna, pitka i napojna voda			
broj	broj	broj	
1 L ✓ D 8	L C	FP 0 AP 60	1 L 11 D 8
2 L 3 C	D L		2 L 11 D 11
3 D 3 C	8 C		3 L 10 D ✓
4 L 4 C	D		4 L 10 D 0
5 D 3			5 L 10 D 8
6 L 3 C			6 L 0 D 0
7 D			7 L D
8 DT L 20 D 0	L 90 D 90	Pitka voda	8 L D
9 DT L D	L 90 D 72		
10 DT L D	L D		

Za stroj: zatraženo pumpanje ili ispumpavanje:

u sati	zatraženo	predio
		248
		248
		271
		767

Ako traženje nije izvršeno - uzrok:

I. časnik:

Stanković

NB. Nagnuće broda uzimati u račun:
pri iscjedivanju (ispumpav.) tankova - stonova i
pri završetku ukrcaja.

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Defendant's Exhibit F

Dan i sat opažanja:

Izmjerena gustoća vode	25
Nagnuće broda	
Srednji gaz u slatko-slankastoj vodi	P K 4
Srednji gaz u morskoj vodi	P K 5
Višak za slatko-slankastu vodu (Fresh water allowance)	2 V

Knjiga stanja tankova - stonova

Dan 8. 8. 68		u sati 6:00	
TANKOVI Balastna, pitka i napojna voda			
broj	broj	broj	broj
1 L 5 D 8	L C	FP AP 60	1 L 15 D 4
2 L 3 C	D L		2 L 11 D 11
3 L 4 C	D L	8 C	3 L 10 D 4
4 L 3 C			4 L 10 D 6
5 L 3 C			5 L 10 D 5
6 L 3 C	DT L 25 D 5	L 75 D 75	6 L 10 D 5
7 L 3 C	DT L D	L 85 D 85	7 L D
8 L 3 C	DT L D	L D	8 L D

Za stroj: za traženo pumpanje ili ispumpavanje:

u sati	zatraženo	predio
	23:00	
	22	
	20:00	
	6:00	

Ako traženje nije izvršeno - uzrok:

NB. Nagnuće broda uzimati u račun:

Pri iscjedivanju (ispumpav.) tankova - stonova i pri završetku ukrcaja.

I. časnik: Peter Živin

Defendant's Exhibit F

Dan i sat opažanja:

Izmjerena gustoća vode		
Nagnuće broda		
Srednji gaz u slatko-slankastoj vodi	P K	
Srednji gaz u morskoj vodi	P K	
Višak za slatko-slankastu vodu (Fresh water allowance)	V	

WATER
LEVEL
INDICATIONS
IN
METERS
AND
DEGREES
OF
LISTING
IN
METERS
AND
DEGREES
OF
GAS
IN
SALT
WATER
AND
SEA
WATER
FRESH
WATER
ALLOWANCE

NB. Nagnuće broda uzimati u račun:

pri iscjedivanju (ispumpav.) tankova - stonova i pri završetku ukrcaja.

Knjiga stanja tankova - stonova

Dan 12. 6. u sati 6.15			Stonovi
TANKOVI Balastna, pitka i napojna voda			
broj	broj	broj	broj
1 L D	7 C	FP	1 L D
2 C	D	AP	2 L D
D	8 C		3 L D
L	D		
3 C			4 P
D			D
L			
4 C		Pitka voda	5 L D
D			
L	DT L		6 L D
5 C	D		
D	DT L	L	7 L D
6 C	D	L	8 L D
D	DT L	D	

Za stroj: za traženo pumpanje ili ispumpavanje:

u sati	za traženo	predin
06.30	12544 PAU4NDC	12

Ako traženje nije izvršeno - uzrok:

I. časnik:

M. Stanković

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Defendant's Exhibit F

Dan i sat opažanja:

Izmjerena gustoća vode	
Nagnuće broda	
Srednji gaz u slatko-slankastoj vodi	P K
Srednji gaz u morskoj vodi	P K
Višak za slatko-slankastu vodu (Fresh water allowance)	

Knjiga stanja tankova - stonova

Dan 10. 1. 65 u sati 6:00		TANKOVI Balastna, pitka i napojna voda		Stonovi
broj	broj	broj	broj	
1 L 0	L	FP	1 L 375	
D 5	C		D 375	
L 2	D		L 25	
2 C	L	AP pričin2	D 25	
D 2	C		L 10	
L 2	D		D 5	
3 C			L 10	
D 2			D 5	
L 2			89999999	
4 C			L 10	
D 2			D 5	
L	DT	L 55	L 55	
C	D	D 70	D 70	
D	DT	L	L 85	
L	D	D	L	
6 C	DT	L	L	
D	D	D	D	

Za stroj: zatraženo pumpanje ili ispumpavanje:

u sati	zatraženo	predio
12 PUMPAV 4	26.7	
SE NO 1	26.0	
	26.7	

Ako traženje nije izvršeno - uzrok:

NB. Nagnuće broda uzimati u račun:
Pri iscjedivanju (ispumpav.) tankova - stonova i
pri završetku ukrcaja.

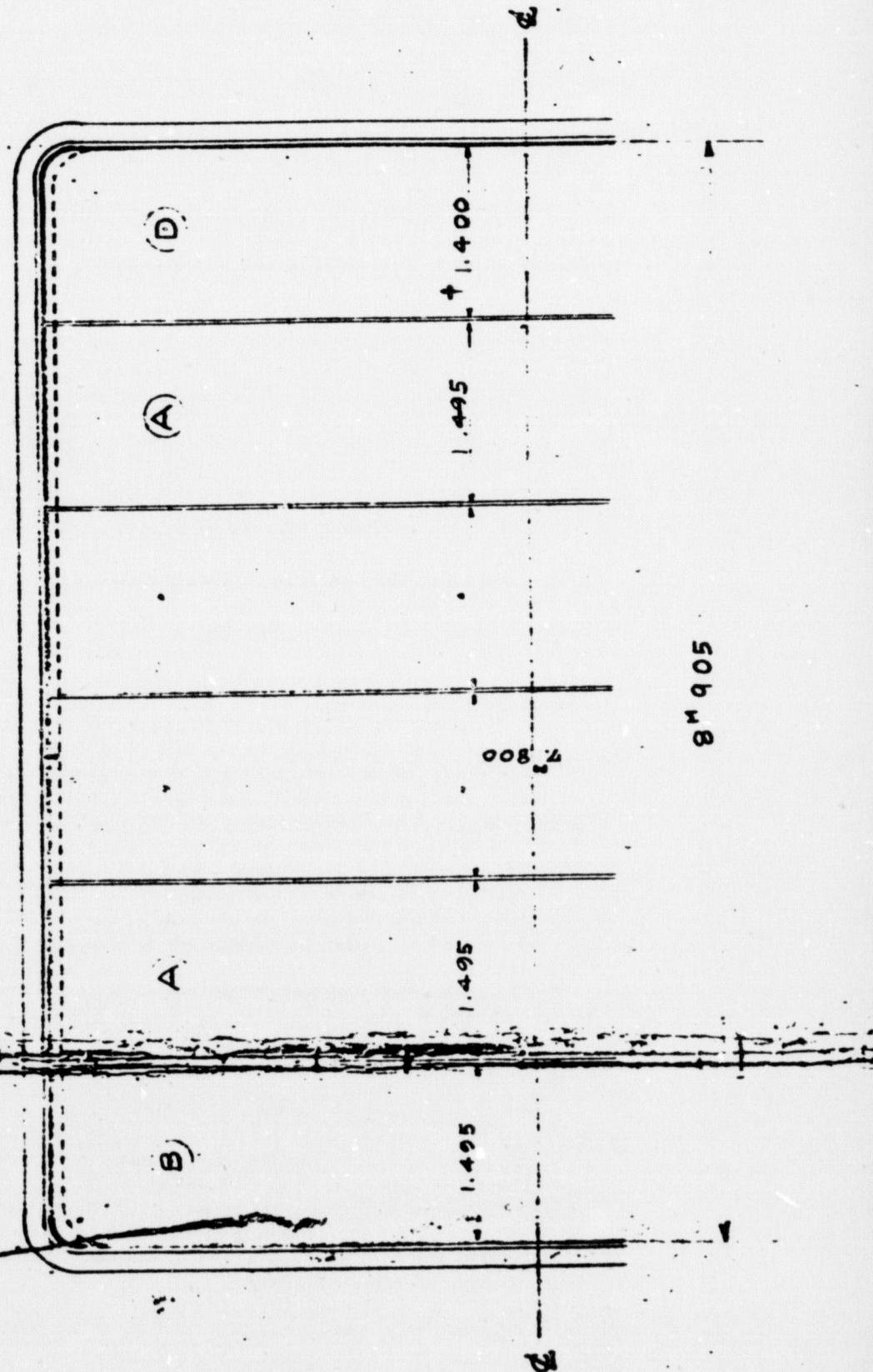
I. časnik: *Steček*

A 145

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DEFENDANT'S EXHIBIT G--PORTION OF STEEL HATCH COVER PLAN
SHOWING NO. 1 HATCH

NO. 1 CARGO HATCH COVER (PONTOON TYPE)
THIS HATCH COVERS CONSIST OF 4 (A) TYPE,
(B) TYPE AND / (D) TYPE.
+ SHOWS THEORETICAL LENGTH.



DEFENDANT'S EXHIBIT R--SURVEY REPORT OF JAMES F. LINDSAY

OFFICE OF
JAMES F. LINDSAY
MARINE CONSULTING ENGINEERING
SURVEYORS AND APPRAISERS
76 BEAVER STREET
NEW YORK S. N. Y.
CABLES: "INVERMARK" NEW YORK

NEW YORK. February 16, 1968

REPORT OF SURVEY

No. 1313

THIS IS TO CERTIFY THAT I, the undersigned, did, at the request of Lamort, Burns & Co., Inc., 26 Broadway, New York, New York, and on behalf of underwriters concerned, survey the

Motorvessel "PIRAN"

10,879 Gross Tons

on February 13th, 1968, while lying afloat discharging cargo at the Cilco Terminal, Bridgeport, Connecticut, in order to ascertain the extent of damage alleged to have been sustained in consequence of this Vessel having encountered heavy weather during February 1st through 9th inclusive, 1968, while on a loaded passage from Newport, England to Bridgeport, Connecticut.

This Vessel is a closed shelter deck 16079 D. W. T. Six cargo holds with machinery aft registered dimensions 490'11" x 64'6" x 41'6" a raised forecastle head, and superstructure aft. Built in Japan, June 1959 to Lloyd's f100AI standard last Special Survey September, 1963.

Copied below are log book extracts of entries relative to heavy weather encountered:

"Page of Log Book 2

Thursday, February 1st 1968

In the morning wind from SW and W continually increasing and it reached force 7-8. Sea from same direction force 7. Ship is heavily pitching and rolling, with water all over her deck and hatches. Later wind from direction NW force 8-9. Ship is loosing speed. It is impossible to sound tanks and bilges. It was ordered into engine to pump them out temporary. It is impossible to ventilate the cargo.

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Defendant's Exhibit R

No. 1313

Motorvessel "PIRAN"

2

February 16, 1968

Page of Log Book 3

Friday, February 2nd, 1968

In the morning wind from direction NW force 8. Sea from same direction force 7. Ship is pitching and heavily rolling with water all over the deck and hatches. Ship is loosing speed. It is impossible to sound tanks and bilges. It was ordered in the engine to pump them out temporary. In the afternoon weather is improving.

I decline any responsibility by myself, the crew and owner, for any damage to the cargo or the ship, imputing case to force mayor and enter this sea protest accordingly, reserving the right to extend the same when and where need my required. Rest omitted.

Page of Log Book 9

Thursday, February 8th, 1968

In the afternoon wind from SE continually increasing. At 16 00 change the ship's course and put it in more convenient into the south direction. Speed poor 3 Knots. Wind gradually increased in force and sea became rough from II and III Qrs. In the evening they reached force 7. The waves washing over decks and hatches, vessel rolling and pitching and straining very heavily.

Page of Log Book 10

Friday, February 9th, 1968

After midnight wind from S gradually subsided. At 03 00 the ship is returned in main course. In the morning hours during making control around decks and hatches on hatch No. 1 is seen that two hatch covers are damaged. One broken and fallen in TD. In hold seen from 2-3 m of sea water on top of steel coils. It is seen more small damages on deck. At 07 00 wind changed into W and NW increasing and reached at 12 00 repeatedly force 8-9. The hold No. 1 impossible to close. The ship continue voyage with poor speed and constantly pumping hold No. 1. Sounding of other tanks and bilges is impossible. Ventilation of cargo is impossible. Towards afternoon wind decreased and sea gradually diminished. I decline any responsibility by myself, the crew and owners for any damage to the cargo or the ship imputing case to force mayor and enter this sea protest accordingly, reserving the right to extend the same when and where need my required. Rest omitted.

Britgeport, February 11th 1968

Master/

s/ Rupert Capt. Benedikt

s/ Rupert Capt. Benedikt /

2/1/68 1100/2400 hours. Wind W to N.W. force 8 to 9. Sea force 7 to 8. Cr. 265°. Bar. 1023. N.P. Lat. 51°05'N. Long. 12°21.6'W. Dist. 297! RT. 25 Hrs. AS. i.e. 88 Kts. Heavy rolling and pitching. Sea over deck from #3 hatch to aft. Vessel's speed is below normal. Can not take soundings. Engine room ordered to pump every 4 hours. No ventilation.

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Defendant's Exhibit R

No. 1313

Motorvessel "PIRAN"

3

February 16, 1968

- 2/2/68. 0000-1600 hours. Wind 0400 W-8, 0800 NW-8, 1200 NW-8
1600 NW-7-8. Cn. 261° to 257°. Bar. 1022-1031.
N. P. Lat. 50°28'N. Long. 19°25'W. Dist. 217'.
RT. 24 Hrs. AS. 9.04 Kts. Remarks as the day before
except that the seas are coming over deck beginning at the bow.
- 2/3/68. 1200-1600 hours. Wind 1200 SW-7, 1600 WSW-8,
2000 WSW-9. Cn. 254°. Bar. 1024-1018. N. P.
Lat. 49°02.8'N. Long. 27°13.5'W. Dist. 357'.
RT. 25 Hrs. AS. 14.28 Kts. Heavy waves over decks
and hatches. Vessel rolling and pitching heavily. Speed
slowed down. No ventilation.
- 2/4/68. Wind moderate to light. Rain. Long swell. No ventilation.
N. P. Lat. 47°48'N. Long. 3°58'W. Dist. 286'. RT. 24 hrs.
AS. 11.92 kts.
- 2/5/68. N. P. Lat. 45°09.5'N. Long. 40°51'W. Dist. 324'.
RT. 25 Hrs. AS. 12.96 Kts. Rain. Spray over decks.
No ventilation.
- 2/6/68. N. P. Lat. 42°58.1'N. Long. 47°29.1'W. Dist.
RT. 24 Hrs. AS. 13.21 Kts. Fog patches.
- 2/7/68. N. P. Lat. 42°02.5'N. Long. 55°01'W. Dist.
RT. 25 Hrs. AS. 13.60 Kts.
- 2/8/68. 1200-2400 Hours. 1200 SE-6, 1600 SW-7, 2 0 SW-10,
2400 WSW 10-8. Cn. as per Master's orders. Head into
the sea. N. P. Lat. 41°09.5'N. Long. 62°04.0'W.
Dist. 321'. RT. 24 Hrs. AS. 13.79 Kts. In the afternoon
the wind is increasing from the SE from strong to heavy.
Vessel's course changed, heading into the sea. Speed re-
duced to 88 RPM. Speed 3 Kts. In the evening the wind and
sea increase from the 2'd and 3'rd quadrant and the wind
increases to force 10. Waves coming over decks and hatches.
Vessel is rolling and pitching heavily.
- 2/9/68. 0000-2400 hours. Wind, 0400 WSW-5, 0800 NW-8,
1200 NW-8, 1600 NW-6, 2000 WNW-7, 2400 WNW-5.
CN. 270°. Bar. 983-1000. N. P. Lat. 40°32'N.
Long. 65°40'W. Dist. 172'. RT. 25 Hrs. AS. 6.88 Kts.
After midnight the wind from the South is diminishing. At
0300 the vessel is returned to the course. In the morning
hours, during a deck check it was found that two hatch covers
of the #1 hatch are damaged. One hatch pontoon is broken and
is in the 'tween deck. In the lower hold water is observed
to a depth of 2 to 3 meters, over the top of the steel coils.
Other small damages are also observed on the main deck.
At 0700 hours, the wind is changing to W and NW and at
1200 hours reached force 8 to 9. We are unable to close the
#1 hold. The vessel continues the voyage with poor (slow)
speed, continually pumping the #1 hold. Sounding of other
tanks or bilges is impossible. Towards the afternoon the
wind decreases and the sea is diminishing in strength.

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Defendant's Exhibit R

No. 1313

Motorvessel "PIRAN"

4

February 16, 1968

2/10/68. N.P. Lat. $40^{\circ}54.5'N.$ Long. $71^{\circ}14.6'W.$ Dist. 253'. RT. 24 Hrs. AS. 11.00 Kts. Vessel docked at Bridgeport at about 2200 hours. The docking draft was F. 31'11", A. 29'01", M. 30'06". The vessel had put 200 tons ballast water in the after peak to bring the bow up somewhat."

Upon examination found

Forecastle

The jackstaff bent at a 45° angle.

Starboard aft two tier railing distorted for approx. eight feet.

Main Deck

Number One Hatch

Port hatch coaming generally wavy

After hatch coaming generally wavy

Three (3) 29' x 26 1/4 hatch tarpaulins torn

Two (2) steel pontoon type hatch covers badly buckled.

Forward bulkhead of masthouse aft of No. 1 hatch heavily set in between frames.

The port and first inboard pipe stations from main deck to cargo winch platform fwd. of No. 1 masthouse fractured at welded connection.

Main deck set down on port side aft of No. 1 hatch at seam in line with fwd. bulkhead of fwd. masthouse.

Port longitudinal hatch beam, distorted in second bay fwd of after bulkhead.

Six deckhead beams, from port longitudinal hatch beam to shell in second bay from aft bulkhead set down and distorted.

One (1) deckhead beam port of centre line pulled away and broken at weld in second bay from after bulkhead.

Centreline wooden shifting bulkhead aft of No. 1 hatch demolished.

'Tween Deck

'Tween deck hatch coaming sharply indented on after coaming port side.

Stiffening bar fwd. coaming, fractured stbd. side of ladder.

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Defendant's Exhibit R

No. 1313

Motorvessel "PIRAN"

5

February 16, 1968

'Tween Deck (continued)

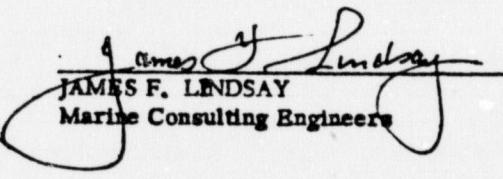
Approx. 1000 lineal feet of cargo battens in lower No. 1 hold broken.

Four (4) bronze wing bolts broken on 'tween deck trimming hatch covers broken.

Surveyors Notes:

All of the foregoing damages would in my opinion be consistent with the cause alleged.

The chief mate indicated additional damage on deck alleged sustained during the same period of heavy weather, none of which effected the watertightness of the hull, accordingly these were not recorded.


James F. Lindsay

JAMES F. LINDSAY

Marine Consulting Engineers

DEFENDANT'S EXHIBIT X--SURVEY REPORT OF L. D. JONKER

Rule 2

REPORT OF SURVEY CONDUCTED ACCORDING
TO THE RULES FOR SURVEYS AND INSPECTION
FOR CONSIDERATION BY THE COMMITTEE OF THE MARITIME REGISTER OF SHIPS

Ship's Name & M.S.	PIRAN	Port No.	R. 117, 1st Survey, 1968
Flagging Number & L.L.	527318	Closure No.	10879
Port of Registry	KOPER	Date of build	6-56
No. of visits	15	First date	28-12-67
Chart S issued & copy herewith?	yes	Damage rpt. issued & copy herewith?	no
Date of completing rpt.	20-1-68	Surveyed at, if different from Port above	
Safcon Cert. (ST) (is surveyor present?)	no	If surveyed in D.D. last time of examination	12-1-58
Has a Load Line Survey been held?	yes	Summer freeboard re-verified	yes

Since which additional Rpt. S is attached: (Contd); (A); (DPC); (EGD); (DRG)

Survey fees

Damage fee

Expenses

S.A. fee

Please see LR/JB for slip.

I have surveyed the above-named ship in accordance with the Rules for Alterations, Damage Repairs, A.S., D.S. and Periodical Special Survey (B), due 9-67.

The following alterations have been carried out now
for compliance with the requirements of 1966
Load Line Convention:

- 1) Portable steel plates on forecastle bulkhead replaced by hinged steel grating. smooth tight doors.
- 2) From both existing smooth tight doors in poops front the sill height increased to 600 mm.
- 3) Scupper pipes from propeller 13 p. and 35), combined to 1 starboard p. 25. each. and leading overboard more than 450 mm below freeboard deck, now fitted with single G.N.R.V.

Please see Report D (cont'd) page

I declare that the items detailed in this report (except as stated otherwise) comply with the requirements of the Merchant Shipping (Cargo Ship Construction and Survey) Rules 1966, applicable to General Trade vessels for the service on which the ship is intended to pay normally international voyages/voyages within the limits

Prud'homme
pro Secretary

LLOYD'S REGISTRE

(The above declaration applies only to existing cargo ships of 1000 tons gross and over registered in the U.K.)

The items now surveyed are detailed on this report. All work reported or placed in good condition unless otherwise stated.

I confirm therefore that this ship remains as classed with French Register of Dry Docking 1-68 and to have
as protection A.S. 1-67 and S.S. 1-58 without any
of the conditions hitherto attached to the ship's
class.

ALSO FOR

L. D. JONKER

Where conditions of class are recommended to be
retained, imposed, amended or deleted, particulars
will be fully set out on the front coverpage.

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Defendant's Exhibit X

	Defendant's Statement	Officer's Statement	Report of Mr. TONNER	Title 1 1st Section 1970
Water-tight doors	good	good	good	good
Watertight bulkheads	good	good	good	good
Fire doors	good	good	good	good
Cabin doors	good	good	good	good
A.P. doors	good	good	good	good
Lifeboat doors	good	good	good	good
Boat davits	good	good	good	good
Under E.A.S.	good	good	good	good
Cow. Bunker	none	Scuppers, discharges & valves	good	good
— wall	good	Guard rails & bulwarks	good	good
Duct keel	none	Freeling ports	good	good
Cement asphalt, etc., on hull shell	none	— & lolliness	good	good
Weather decks	good	Fittings & appliances for timber deck cargoes	good	good
Sounding pipes water couplers under	good	Means of escape: (a) machinery spaces	good	all relevant sections of present Rules complied with
Windlass	good	(b) crew and passenger spaces	good	✓
Masts & standing rigging	good	(c) spaces in which crew normally employed	good	
—	good	Communications between: (a) bridge & eng. room	good	
W.T. doors	good	(b) bridge and alternative steering position	good	
Fire equipment	not examined	Steering control systems (main and alternative)	good	
Other items:		Helm indicator	good	
		Protection of steering wheel & gear	good	
		Steering arrangements (main)	good	
		(aux.)	good	

At each regular dry docking time here the expiry date of and continuing until 60 days for the Cargo and Safety Equipment Certificate or Passenger Ship Safety Certificate:- **65-7-22.**

EQUIPMENT:

Equipment letter *ST* 225-54-
Pecan Hill from agent in — Sabine

Digitized by srujanika@gmail.com

Leopold von Sacher-Masoch

162 242

Monachus schauinslandi 293 - 294

July 19, 1944 - 234

...and I am glad to say

Rpt. No. (cont.)

Ship's Name SS/MS PIRATE

Port P. M. S. Rpt. No. 57266

- 4) Hoppers from inner deck space removed. Holes in deck were cleaned and covered with metal plate. H.R.P.'s were covering to ER hatch. Hatch in hull blanked off by welded sprigot plates.
- 5) 5" hoppers with hatches cleaning down-fit small ovalized nose removed and holes in hull blanked off by welded sprigot plates. Holes in deck by welded coverlets.
- 6) Metal steel girders over tomays hatched replaced by new steel 33x33, significantly stiffened, with rubber packing and 3/4" hook bolts, spaced max 12".
- 7) Railing on forecastle- and cargo decks fitted with additional rail between lowest course mid deck.
- 8) New扶手栏杆 marked, cut in, hard stopped and painted over.

P.W. outstanding damage have been permanently dealt with now as follows:

- 1) Forecastle shears 5m 3 st. from forward port released and fairied; in way part of forecastle deck (fished) cut out and new part inserted.
- 2) Bulwark abreast No. 1 hold 1/2 port removed, fairied and refitted, including top rail.
5 bulwark posts removed and 3 fairied.
- 3) Starboard side plates F14, C14, C15, H14 & H15 removed. F15 fairied in place; C13 small post removed.
In way in No. 2 hold 11 frames dropped and part removed. Fairied and refitted; bulkhead No. 2 hold D/E port removed; in exceptant stringer part removed.
- 4) Starboard side plates C17, H5 and H7 removed; G6, H5 & H8 fairied in place. In way in No. 2 hold 2 frames dropped and part removed, fairied and refitted; 2/3 part hatch on L. beam part removed; bulkhead E/F port removed; in E/R 3 frames part removed, fairied and refitted; 1 mid frame part removed.

3 lines for Fig. 2 (cont.) see c.

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Exhibit 3 (cont.)

Ship's Name SSMS PIRAN

Port Boston

No. 5726

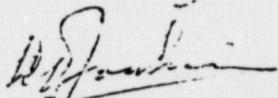
- 5) Starboard shell plate L 4 mm & inverted;
is fixed in place.
 - 6) Port shell plate H 19 dropped and part removed;
in way 1 frame dropped and part removed,
fixed and refitted; small part of bottomhead
damaged - EP removed.
 - 7) Port shell plate F 7 dropped and part removed.
in way 2 frames dropped and part removed
fixed and refitted.
 - 8) Forward almost No 1/2 hatch p. 3 fixed
in place; in way 3 hatches stints removed.
 - 9) Port shell pl. to E 13 dropped and part removed.
 - 10) Port shell plate G 10 dropped and part removed;
in way from bulkhead 4/5 holes small part
removed.
- In completion of foregoing repairs appropriate
tanks tested, ship and deck in way tested
and all found tight.
- 11) Bottom profile of rudder was having excessive
clearance (attributed to spider water salient
reported previously), hole inudder corroded.
Rudder + head unhooked. Rudder- and
steering quadrants re-scored, alignments
checked. Both pintles renewed (1 corroded;
1 cracked). In completion rudder and
steering gear tried and found in good
working order.

S.R. 1-220

All outstanding dealt with and ready to be
selected.

S.R. 1-Appen dix 20

"Bullets in a few shell plates (p. 25)." Found to
contain effective. Item to remain in force.



(W.D. JAVIER)

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Defendant's Exhibit X

PIRAN

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S.D. 3 100 3-37

67266

Hold & Tween Decks

Compartments

Tanks

Condition

Time

(See illustrations in Register
1944)

No. 1	Hold	good	F.P. tank	good	good
	Tween decks	good	A.P. tank	good	good
No. 2	Hold	good	D.D. tanks & quams	good	good
	Tween decks	good	481+21/1362/425 } 481 3,4 3,6 } 102+32 (D.E.) } 485 pvs (F.O.) not ex'd	good	good
No. 3	Hold	good	487 p. (D.E.) not ex'd	good	good
	Tween decks	good	487 s. (F.O.)	good	good
			487 D. (D.E.)	good	good
			F.W. in ER. ss.	good	good
			210. ER. ss.	not ex'd	good
			CD's in EN 2 for echo s. }	good	good
No. 4	Hold	good	O.F. bunkers		
	Tween decks	good	2 m TD in } ER aft 5 }	not ex'd	good.
No. 5	Hold	good			
	Tween decks	good			
No. 6	Hold	good	Setting tanks	none	
	Tween decks	good			
			Deep tanks		
			422/3 holds ?		
			pvs 5	good	good
	Cargo binnies	good	Side tanks	none	
	Culling, etc	good			
			Other tanks		
			Vent lower P.P.	good	good.

W. J. Tamm
(E.O. Turner)

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Defendant's Exhibit X

Rpt. No.

Ship's Name SS/MS PIRAN

Port Rotterdam
67260

(Under above line is compiled by Lloyd's Register of Shipping)

Rpt. No.

Port of Rotterdam

Date 22nd January 1968

REPORT ON MASTS, SPARS AND RIGGING

Dear Sir(s),

In accordance with your instructions, I examined the Masts, Spars and Standing Rigging, including fittings, of the SS/MS PIRAN

on the (date of examination) 5th January 1968
and found that 3 x 2 mortised derrick posts
and the signed signalling mast
on top of wheelhouse were all in good
condition:

✓

Fee

Rigger

To the Surveyor(s),

Lloyd's Register of Shipping,

Surveyor

W. J. Smith
(L.S.J. Jenker.)

DEFENDANT'S EXHIBIT AA--LOADLINE CERTIFICATE

Defendant's Feb 24/2
G. D. D. S. G. V. K. O.
S. P. A. M. O. L. E. S. C. G. V. K. O.
Starboard port. 14° 20'. K. J. B. D.

CERTIFIED COPY.

No. 94553

Logg's Register of Shipping

FOUNDED 1760

RE-CONSTITUTED 1834.

International Load Line Certificate

Socialistic Federative

Issued under authorisation of the Government of the Federal People's Republic of Yugoslavia
in accordance with the provisions of the International Load Line Convention, 1930.

Ship.

Port of Registry.

Gross Tonnage.

	Dead Weight			Upper Freeboard	Lower Freeboard
	Marked.	Fractional from deckline.	Load Line.		
Tropical	T	1000.00	2100.00 above S	L.T.	9ft. 0ins.
Summer	S	1000.00	centre of deck	L.T.	9ft. 5ins.
Winter	W	1100.00	1000.00 below S	L.W.	10ft. 0ins.
Winter in North Atlantic ...	WNA	0.00	1000.00 below S	L.W.A.	11ft. 0ins.

Allowance for fresh water for all freeboards.

8 ins.

Nil ins.

The upper edge of the deckline from which these freeboards are measured is _____

above the top of the _____

deck at sides, ports and stern, when loaded to the load line.

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Defendant's Exhibit AA



This is to certify that this ship has been surveyed and the freeboards and load lines shown above have been assigned in accordance with the Convention.

This certificate remains in force until 31st January 1972.

Issued at LONDON on the 20th day of February 1968

R. M. Turnbull
Secretary

R. M. Turnbull
Chairman

Note.—Where no-going distances straight or island water, deeper loading is permitted corresponding to the weight of fuel, etc., required for consumption between the point of departure and the open sea.

I have surveyed this ship for the purpose of seeing whether this Certificate should remain in force and the Survey has been completed to my satisfaction.

Signature of Surveyor _____ Place _____ Date _____

I have surveyed this ship for the purpose of seeing whether this Certificate should remain in force and the Survey has been completed to my satisfaction.

Signature of Surveyor _____ Place _____ Date _____

I have surveyed this ship for the purpose of seeing whether this Certificate should remain in force and the Survey has been completed to my satisfaction.

Signature of Surveyor _____ Place _____ Date _____

I have surveyed this ship for the purpose of seeing whether this Certificate should remain in force and the Survey has been completed to my satisfaction.

Signature of Surveyor _____ Place _____ Date _____

100-47. (MADE AND PRINTED IN ENGLAND.)

DEFENDANT'S EXHIBIT AF--DAMAGE CERTIFICATE

FEDERAL COMMERCE & NAVIGATION COMPANY LTD. MONTREAL

DAMAGE CERTIFICATE

*Copy purposed to C.J.B. P.M. 1/15/68**V-21 CJB*Newport, Mon., January 30th 1968Damage claim of M/v "PIRAN"
Date of arrival: Jan. 19th 1968VOY.: T/C 1/68 (21)
Berthed at Alexandre docks

TO MESSRS.:

THE NEWPORT STEVEDORING Co. LTD. NEWPORT, MON.

The following damages has been caused by stevedores whilst loading steel coils
at:Lower hold No. 1

1. One bottom board 400 x 25 x 6,5 cm broken by fork lift.
2. One bottom board 120 x 25 x 6,5 cm broken by fork lift.
3. One cargo batten 400 x 15 x 5 cm broken by fork lift.
4. The edge of the lower longitudinal frame port side bent 2" in lenght of 200 cm.
5. The edge of the lower longitudinal frame starboard side bent 2" in lenght of 150 cm.

Lower hold No. 2

Port side:

1. Steel protecting plates No. 3, 4 bent 3- 3,5" inside in lenght of 550 cm;
10 steel screws broken.
2. Steel protecting plate No. 6 bent 2" in lenght of 200 cm.

Starboard side:

3. steel protecting plates No. 2, 5 bent 1" inside in lenght of 500 cm, plates
No.3, 4 bent 2 - 2 $\frac{1}{2}$ " inside in lenght of 500 cm; 5 screws broken.

Lower hold No. 3

Port side:

1. Steel protecting plate No. 4 bent 1 $\frac{1}{2}$ " inside in lenght of 120 cm.

Starboard side:

2. Steel protecting plate No. 4 bent 1 $\frac{1}{2}$ " inside in lenght of 130 cm.

Lower hold No. 4

Port side:

1. Steel protecting plates 3, 4, 5, 6 bent 1-4" inside in lenght of 1250 cm,
2 screws broken.

Starboard side:

2. Steel protecting plates 1, 2, 3, 4, 5, 6, 7 bent 1-4" inside in lenght of 1500 cm,
5 screws broken.

3. One bottom board 400 x 25 x 6,5 cm broken by fork lift.

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Defendant's Exhibit AF

Lower hold No. 5

Port side:

1. Steel protecting plates No. 1, 2, 3 bent 1-4" inside in lenght of 500 cm,
2 screws broken; plates No. 6, 7, 8, 9 bent 1-5" inside in lenght of 1000 cm,
8 screws broken.

Starboard side:

2. Steel protecting plates No. 1, 2, 3 bent 2" inside in lenght of 500 cm, plates
6, 7, 8, 9 bent 1-4" inside in lenght of 1000 cm; 6 screws broken.

Lower hold No. 6

Port side:

1. Steel protecting plates No. 1, 2, 3, 4 bent 2-4" inside in lenght of 700 cm.

Starboard side:

2. Steel protecting plates No. 1, 2, 3, 4 bent 2-4" inside in lenght of 800 cm,
5 screws broken.

The above damages has been notified ti and inspected by Chief
Stevedore.

Signed on and on behalf of

J. Jackson

Chief Stevedore



Master of M/v "PIRAN"

Rupert

/Rupert capt. Benedikt/

The reference: Steel protecting plates bent, in this report indicates that the vertical plate which runs longitudinally in each hatch above the limber board is set back in its lenght mentioned in centimeters by the amount mentioned in inches.

[Handwritten signature over the text]

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Defendant's Exhibit AF

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FEDERAL COMMERCE & NAVIGATION COMPANY LTD. MONTREAL

DAMAGE CERTIFICATE

Newport, Mon., January 30th 1968

Damage claim of M/v "PIRAN"
Date of arrival: 19th Jan. 1968

VOY.:T/C 1/68 (21)
Berthed at Alexandre docks

CONTINUED

To MESSRS.:

The NEWPORT STEVEDORING Co.LTD. NEWPORT, MON.

Lower hold No. 3

Port side:

1. Steel protecting plates No. 5, 5 bent 2" inside on lenght of 450 cm.

Starboard side:

2. Steel protecting plates No. 2, 5, 6 bent 1-3" inside in lenght of 600 cm.

Lower hold No. 4

Port side/

1. Steel protecting plate No. 2 bent 1" inside in lenght of 200 cm.

Lower hold No. 5.

Port side:

1. Steel protecting plates No. 5, 4 bent 3" inside in lenght of 450 cm.

Starboard side:

2. Steel protecting plates No. 4, 5 bent 2" inside in lenght of 500 cm.

Lower hold No. 6

Port side:

1. Protecting plates 5, 6 bent 2" inside in lenght of 500 cm.

Starboard side:

2. Steel protecting plate No. 5 bent 1" inside in lenght of 200 cm.

The above damages has been notified to and inspected by Chief Stevedore.

Signed on and on behalf of

S. Jackson
Chief Stevedore



Master of M/v "PIRAN"

Rupert capt. Benedikt